|  |  |
| --- | --- |
| **1.** | **The population of the United States is approximately** /files/assess_files/84c8c073-6fea-4d97-aac5-8d4e441ca36e/a4c3fb26-a3e1-4a05-bcb7-636ffb4f451c.png **people. The population of Germany is approximately** /files/assess_files/84c8c073-6fea-4d97-aac5-8d4e441ca36e/da46490f-19ea-4355-b242-40de7198c024.png **people. Which statement about the populations of these countries is true?** |
|  |
|  | |  |  | | --- | --- | | **A.** | The population of Germany is almost 3 times the population of the United States. | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | The population of Germany is almost 4 times the population of the United States. | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | The population of the United States is almost 3 times the population of Germany. | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | The population of the United States is almost 4 times the population of Germany. | |
|  |  |
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| **2.** | **An Olympic-size swimming pool holds approximately** /files/assess_files/8965db71-8d58-4e74-bbe3-7b4af395f6f0/eaed42ac-8541-4014-b735-6ba60d99f143.png **gallons of water. The capacity of this swimming pool is between which interval?** |
|  |
|  | |  |  | | --- | --- | | **A.** | 100 gallons to 1000 gallons | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 1000 gallons to 10,000 gallons | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 10,000 gallons to 100,000 gallons | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 100,000 gallons to 1,000,000 gallons | |
|  |  |
|  |  |

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| **3.** | **The diameter of a grain of sand is 0.06534 millimeter. Which value is the BEST estimate of this diameter?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/034b6a5d-d46a-458f-8903-455ee680028f/694cc25c-339b-4e24-b6a2-07d7fbe913cb.png millimeter | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/35ba6d24-90fa-4cf9-b607-a40f44bdb8c8/ea1bbba2-6b77-48c8-bd1f-7a23e0ada840.png millimeter | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/77ef6862-693e-43c6-89a2-a378b2f5f2dc/6bbb1def-29f6-4092-abbd-880629e25901.png millimeter | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/6d46b4cf-5708-4003-974f-b2b7bb7fa1bc/ca3a34fd-73dc-4a4c-b4ba-8eaef476f643.png millimeter | |
|  |  |
|  |  |

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| --- | --- |
| **4.** | **The distance from Earth to the Sun is approximately** /files/assess_files/52f89129-1fc7-47af-bf11-5e5d68cc6129/cea403ab-27f7-40cc-bbe4-d02a96c9ddd8.png **miles. The distance from Earth to the moon is approximately** /files/assess_files/52f89129-1fc7-47af-bf11-5e5d68cc6129/6c3ccf56-2006-43e9-af78-5c5a328c41cb.png **miles. Approximately how many times the distance from the Earth to the Moon is the distance from Earth to the Sun?** |
|  |
|  | |  |  | | --- | --- | | **A.** | 18 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 45 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 222 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 450 | |
|  |  |
|  |  |

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| --- | --- |
| **5.** | **The average distance from Earth to the Moon is approximately 238,855 miles. Which expression is the BEST estimate of this distance?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/022a21dc-2513-4021-9fa5-b5658e5d9f1e/0166f10c-a288-467d-b7f4-59fb0a4c4652.png miles | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/fcb58f5e-826d-4304-9575-b56dc4fd8675/d9560b10-4576-448b-bff3-a0f03e520245.png miles | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/d453bbb1-4692-4058-9b5d-c1f9733252af/f669051c-cba6-43c6-b915-197dfc489a70.png miles | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/9dcefed7-f146-43be-9690-8f2312f45a30/5d6246fe-4ae6-4614-bae1-accf5f051826.png miles | |
|  |  |
|  |  |

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| --- | --- |
| **6.** | **The diameter of Jupiter is approximately** /files/assess_files/2a883723-b4ce-4932-9554-2c200db1eed2/98677596-d1b6-4004-9133-f6965c8ea6da.png **miles. The diameter of Earth is approximately** /files/assess_files/2a883723-b4ce-4932-9554-2c200db1eed2/a7518aeb-932c-442b-aedd-23c579b4bcc6.png **miles. Approximately how many times the diameter of Earth is the diameter of Jupiter?** |
|  |
|  | |  |  | | --- | --- | | **A.** | 110 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 11 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 0.9 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 0.09 | |
|  |  |
|  |  |

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| --- | --- |
| **7.** | **Joan’s bacteria project produced** /files/assess_files/98c4eaea-4384-46ee-bb6a-a8cecd49414a/69432532-60ba-462d-9875-8eae98ead930.png **cells and Anne’s produced** /files/assess_files/98c4eaea-4384-46ee-bb6a-a8cecd49414a/7e0687f3-cfcf-43cf-b234-7ced91677252.png **cells. The girls determined that Joan’s project produced** /files/assess_files/98c4eaea-4384-46ee-bb6a-a8cecd49414a/52f2881e-64b1-4dca-93c7-3f9291c1dd50.png **more cells than Anne’s project. What is** /files/assess_files/98c4eaea-4384-46ee-bb6a-a8cecd49414a/397257a4-ef30-4cdf-ad71-b09f41223205.png **in expanded notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | 0.0000000024 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 0.0000000240 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 240,000,000 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 2,400,000,000 | |
|  |  |
|  |  |

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| **8.** | **In 2015, about 895.5 million passengers traveled by plane in the United States. Which value is the BEST estimate of the number of passengers?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/b01f471a-5e1f-4e74-be6e-de581e0a73b2/59fdc366-7e18-4b22-9a2c-216dedb8a4f4.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/e469c302-d568-45cd-ac1a-d97bf6c08801/66e85c53-d32d-46d7-adc4-e59d2da3a909.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/99ae6fee-1457-462e-b510-19e8e27e5aa2/ecae4429-d76b-4030-b5e8-fe3db4716ebf.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/e96817db-ea78-42f1-9053-109a568407af/7c91180c-cd06-40ae-a9f1-5a553d08e469.png | |
|  |  |
|  |  |

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| --- | --- |
| **9.** | **The concentration of the hydrogen ions in an acid is** /files/assess_files/38182eff-a1da-4b13-b176-9eb4d108936c/2beaa483-68f5-4762-92d0-dffd4701f5ec.png **grams per liter (g/L). What is this concentration expressed in standard form?** |
|  |
|  | |  |  | | --- | --- | | **A.** | 0.025 g/L | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 0.0025 g/L | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 0.00025 g/L | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 0.000025 g/L | |
|  |  |
|  |  |

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| --- | --- |
| **10.** | **The density of air is approximately 0.001293 grams per cubic centimeter. Which measurement, in grams per cubic centimeter, is closest to the density of air?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/21d466fc-5158-40d8-8fba-7f9370fd2623/739dfa2d-63ee-4f02-b9df-a28d096abe9e.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/67ea3136-34e3-48f8-9b68-e8e1eedba962/7747e135-9aad-4f4d-9ad0-507046abb76f.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/283a97a9-4de1-484b-8844-69199da168d5/e023ac63-1616-4b6a-8733-2ca5d7797f52.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/4d7e642c-f7ef-483c-b374-ee0f80100002/cb300425-2e39-4d35-acf5-0ba92518cbd8.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **11.** | **Which of the following numbers is closest to** /files/assess_files/94597c3c-4297-47c8-bcdf-c4b4836072bb/20a55460-0815-4661-abf0-9ced296ea813.png**?** |
|  |
|  | |  |  | | --- | --- | | **A.** | 0.04 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 0.004 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 0.0004 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 0.00004 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **12.** | **Hoover Dam spans the Colorado River on the Nevada-Arizona state line. For its construction, the federal government purchased 21,670,000 pounds of gates and valves. Which number is the BEST estimate of this amount?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/b33462fb-51d1-4805-84c2-1428465e1091/8f3a315d-17c7-4356-ac52-d03484cdcded.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/c581b747-c9cc-4942-a86b-0c5674b3e84f/c2366ff5-60d7-480c-a17e-c0b166adbadb.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/fe8bbcae-8ce0-421e-abe7-3760dc7130e5/1eed9f2b-1036-40b1-bfdc-7b3b471e662a.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/8a21ffe8-d391-47fb-9f83-f80373a0dbce/9f2540d2-92f6-463b-82b2-c92cf07b2704.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **13.** | **Approximately** /files/assess_files/ef9d0925-3667-4b38-b808-339647da66b9/57fb91c2-9b91-417f-bcbe-f62300349e7c.png **vehicles drive across the top of Hoover Dam between Nevada and Arizona daily. How many days will it take until the one-millionth car crosses the dam?** |
|  |
|  | |  |  | | --- | --- | | **A.** | 5 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 50 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 500 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 5000 | |
|  |  |
|  |  |

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| --- | --- |
| **14.** | **At an elevation of 1221.4 feet, Lake Mead will hold 28,945,000 acre-feet of water. Which number is the BEST estimate of this amount of water?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/1dc28334-a78d-446b-b91a-63f36dc90c65/84794bf5-78a0-40f8-bf5a-23355890c752.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/a6886b4f-33c0-4411-b49d-471e16c87239/b52ebee0-b873-49d5-97fe-fc18cdf8500e.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/59fe9b1d-2d99-4abc-84bf-1b5d3480683e/72ce8051-274e-493b-8b18-9d60bcd59e02.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/cbc10ffd-ad17-4424-ba49-562672720622/70beed32-992d-48d0-8c19-b99268898fe2.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **15.** | **An automobile company plans to invest $9,200,000,000 in its manufacturing plants. How is this number written using scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/110019c6-987f-4d93-ac9d-8232b3832583/687425f0-d0a9-46c5-ba92-eda2c5b9178b.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/a28d8c78-0ec8-44f7-bb90-f23ad821d00c/7c017ce7-0084-438d-89c3-c16e7d598de5.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/aa7ce512-faaf-4b09-afed-f192880963a7/2257c937-85a5-4030-bc93-7e0b70b7e2d1.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/213b7ae5-261e-4415-aeac-fed47764f3be/288f13a2-341f-461f-975c-4e47785eaa0f.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **16.** | **A recording industry association gave an award honoring the sales of at least 10 million copies of an album or single recording. Which of the following shows 10 million in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/00e7f37a-e5f2-4884-9dbc-7faceb9b166f/880afd15-3ede-409c-a586-cda10f3df6eb.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/edf812b5-03a9-4ba8-93c4-233bb9523d6b/2b9c9cc7-e1d6-486d-ae2f-321e463e1c58.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/cdfd9fe5-4a46-4098-aeb7-1a993092be17/3d710b01-f534-4308-8f8a-e462f75848b3.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/9c889cbb-b81a-4d01-ba40-e81eaa526f78/8ec9f19e-2c3d-4111-9914-af2d4a44145c.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **17.** | **The wingspan of a Western Pygmy Blue butterfly is** /files/assess_files/0dfd7edd-4445-4e44-a6c8-de601aef96a1/cfb9a19b-9bb4-48b1-82d7-87fd514a53e0.png **What is** /files/assess_files/0dfd7edd-4445-4e44-a6c8-de601aef96a1/21143b24-51a8-4406-8aa2-a44e9733ab52.png **written in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/d1ed1961-c2ca-48bd-98aa-6c8b013359f6/2af72303-f86d-4a59-be36-75545a040285.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/b96ba31d-c010-41ea-8280-e4068421d55d/c3254aca-6ca0-443b-961f-1268d708ec7c.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/a119b961-c818-4c20-8237-b94dcdd08435/d5a171cb-6998-484d-ac8a-3ead6f6a3fb3.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/d0847b67-efb1-464d-aefe-a498a75eb733/20e8f491-052e-46a6-8413-f0d54a92ac87.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **18.** | **What is 0.0003246 expressed in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/2a6cd342-5e77-498f-9ac7-5058c8a22360/34d9beec-ee59-4188-b092-085d0fda7ec2.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/763cf676-9dab-44b7-868d-9c54c1616ccb/a72b3e84-b1ba-4ef7-81c7-be9fa892fadd.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/1fb4eb89-81a9-411a-a99c-1623a875eaa9/89f859f7-2848-4a35-ac28-c6fd21ce2976.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/0463e32a-7cc1-4bd2-9165-f4debb2f56c0/90b768b7-9ed4-4b2a-82ac-487902b79ac7.png | |
|  |  |
|  |  |

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| --- | --- |
| **19.** | **A company makes a paper that is** /files/assess_files/708492c7-6ab5-4c6d-bef1-9c09b8874c5c/66985a8e-fb00-4692-8362-f6b7c49a4290.png **of an inch thick. What is** /files/assess_files/708492c7-6ab5-4c6d-bef1-9c09b8874c5c/f981e039-62da-4b64-80bc-bd7891a29dfe.png **written in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/fd8bdb27-c1b1-4523-b959-2b21325e768e/206f7943-311b-4664-92ba-3adb23df5312.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/6309d409-f4d3-4705-b81c-67ba8710fd5d/f41faffe-8e4e-4406-92e0-a82dbc5ca6ba.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/3a4ad47a-5cd8-4c56-98ea-45e01d4f9490/2bffed55-4fac-4602-9723-54dfcabe5783.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/339cf92e-055f-4d70-aec1-143a2eb46152/0918447d-0928-4eba-b6fe-b14e5bafcce1.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **20.** | **Earth is approximately 93 million miles away from the sun. How could this distance be written in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/c7d4e487-5bac-4812-b21a-bc3b1d3b1cc3/20ffcb6f-ec41-48af-98f1-d68f4402352e.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/bdd376ef-7239-4057-a12a-614ac6bab8fd/6cf7b67e-4970-4f93-847f-5133a690a838.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/c448301a-6341-429f-9505-58a7277cd86f/b466a115-f4eb-4e22-9984-39cd03d3fd18.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/70ea8f2c-89bc-43a7-ac60-0d9a36cdceee/b29425ba-9ccc-4eee-b039-b8ae7223a1de.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **21.** | **Engineers at a company developed a thin transparent glass that is** /files/assess_files/3b77c017-9081-479c-a8cf-75f3ed40f19b/29041107-044b-43a5-a2f4-3be303c33714.png **centimeter thick. What is** /files/assess_files/3b77c017-9081-479c-a8cf-75f3ed40f19b/d3a337cf-17e5-406e-af71-e4f575746c91.png **written in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/2fb3e055-9e66-43df-86af-ef4933a00a24/318f9701-3941-4a31-93f0-2c4844473732.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/b0ce304f-9613-4d56-8cb6-06e8ba6883dd/1bb4848b-17a3-4ffe-ad55-5b43a6a7b4cc.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/4582b223-eb5f-4f4a-bf9c-c32f031ff456/877c0a83-fd80-4220-aa17-242c0e9004bb.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/bf4064a5-c06f-406f-b15c-cf769120e7c8/d0e986b5-e69f-476d-9f38-f09c9437c3da.png | |
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| --- | --- |
| **22.** | **The budget for the fiscal year 2003–2004 for the state of Florida was 53.5 billion dollars. Which of the following is another way to write 53.5 billion?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/b0f9480e-9aa8-42f5-bd55-dedc5dce23de/58314eef-a9a2-4e2b-953f-ee0313733de7.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/2ef51db9-7416-4e22-afc8-b94d94b532fe/5c8a5338-346f-4e5b-a4bb-07a8cf419fa3.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/bda807ef-ea0b-44bd-a210-4a071a271abd/473f9415-f1ec-4c8f-8fe8-28e9317e5890.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/1845a49e-a2bf-411f-9907-f9ae837aeca5/bfdcbe81-4c1a-40f4-a0f1-0d2e7d8d99a8.png | |
|  |  |
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| --- | --- |
| **23.** | **Scientists have identified approximately 250,000 existing species of flowering plants. Which expression represents 250,000 in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/2be1c0ca-6180-48b0-badf-3c6b632d2a30/4f270a8b-4154-4a97-b82f-b12b0be3d5b7.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/9c86b213-5a7e-430e-a8ef-019113f8898e/b93ea4ff-d94b-4290-8909-d3ae81b85aa7.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/125ea171-c8ac-4fa3-b449-fe16949a35e0/e321e077-7e9a-43fd-a2f8-daf8888f87b8.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/ac3489ed-347e-409f-a7ad-00ae8b0d28fc/14e66ce0-693b-4ffd-97c2-129635eff2ff.png | |
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| --- | --- |
| **24.** | **In 1803, the United States paid France about $15,000,000 for the Louisiana Purchase. What is 15,000,000 expressed in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/5f784aa3-3353-4ee5-bf21-3d25e78c4543/17e77e08-fd33-4fe5-b7b0-d2fc1239e94f.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/106a308c-827a-4063-8bac-95162c4606f6/a95cd4b9-a63d-4643-9ddc-e3c0e6caff70.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/405ecf4b-0665-4d9c-bc18-3ddc0d6b60d6/1e50dc6f-8d03-45b5-8f9a-d59e52fd3286.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/1a3f6848-4646-4b72-a6aa-8bfcda1fba47/6df53aa9-56b9-4d12-a3d7-68af7b74bd95.png | |
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| --- | --- |
| **25.** | **In the year 2000, there were approximately 532,000 people born in California. What is 532,000 written in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/cdceb0e9-9663-4404-aec4-07725180dcb0/3b5ce73c-7d28-4db3-9601-97e46b10a811.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/def946fb-ab91-436e-ba8d-67713bf03f66/7b6712a1-d405-4ecb-b33d-3802ec70618b.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/bfbba4ec-81a2-4dec-b95e-e5217bc33aab/37f8d55b-9e03-44c6-aaef-e0f8634b8ef6.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/f5cbdda9-95b1-4e6b-b482-a8aa69ec5d72/e7d67f6a-6f4e-4275-a4da-ae43aadf3426.png | |
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| --- | --- |
| **26.** | **The highest note on a piano has a frequency of 4200 cycles per second. What is this frequency expressed in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/ac77c63b-11e6-4dd1-8119-041ff83c0034/e8d9ae9b-9294-4012-a6a6-965d29189997.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/a602ec17-18c8-4704-984d-3d1333f3281e/234dcdc6-f469-47ff-9333-0974659a3325.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/25368aef-b757-46f6-b5a4-37db7c2c17a3/d81cc973-6527-419c-9b0d-2df8557882af.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/42be08a0-f859-4c90-96d5-f9c525884e1d/cfba8555-4175-4f7d-b840-45bfe450bc1c.png | |
|  |  |
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| --- | --- |
| **27.** | **In the year 2000, there were approximately 9,500,000 people in Los Angeles County, California. What is 9,500,000 written in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/94c6520d-dac8-4f9c-b5ec-0b04dc8bffea/b4566f19-74c7-4633-8bf4-b872f3720d07.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/96e02aff-1ca0-44d4-87c3-2e1cdda13859/d9508d3d-7bb1-46f8-81dd-50d8b5bd7e67.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/8fb47349-58a3-43dc-9853-49853e38657a/9e5e0935-f719-4589-98bb-47669b23d7b9.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/b8f781ef-247e-4a62-aa41-82aef34864f3/4ef074cb-704c-41e8-a09b-2402323871bf.png | |
|  |  |
|  |  |

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| --- | --- |
| **28.** | **What is 2,034,000 written in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/2b5be3bb-4db4-4e04-bc67-9a0d51e04725/e16b6a2f-5199-42ee-92c8-8fac6e1d795d.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/420ec33f-6214-4442-9e07-9964fe2b356e/9b8af601-2259-4ab6-bd37-e7f4fbb4fc1b.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/317be973-92be-4477-bcf8-662ada67d0a7/23413d70-2912-46a4-baed-b98a615d5921.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/2b5f412e-0c25-48ec-8d41-aa8748453990/05f63793-1881-44a2-b420-29c458763a04.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **29.** | **Which number is equivalent to** /files/assess_files/09da6fb5-0115-40b3-83cd-ab70b849a076/96ffefd6-91a0-48a1-a5ea-1952dfcfb46f.png **?** |
|  |
|  | |  |  | | --- | --- | | **A.** | 0.0000000777 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 0.000000777 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 77,700,000 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 7,770,000,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **30.** | **Which number is equivalent to** /files/assess_files/5f052edf-973f-461b-805e-bc70fc3aa18e/c610ffa9-48c1-4d20-8f4e-05045c57fbe3.png |
|  |
|  | |  |  | | --- | --- | | **A.** | 0.0032 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 0.032 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 320 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 3200 | |
|  |  |
|  |  |

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| --- | --- |
| **31.** | **The Sun has a diameter of approximately 1,390,000 kilometers. How is the approximate diameter of the Sun expressed in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/491475ce-8652-4805-bf80-b8a79e51c857/de9a500a-4ef3-41a3-8e8a-671fb796cf1c.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/0ba1ecad-c94f-4d9e-b2e3-b276b4953a3f/89912c53-0dd6-4f79-abc6-d1ad788cec17.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/9a91c08c-947e-4aa3-b4fe-1a7841f074a3/eca2aa24-996f-4260-b0a1-7d47f775902d.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/696132e2-d4b2-4874-870a-469579c57a81/ee4a1c95-f5d6-450a-a068-b8c86acf5ba3.png | |
|  |  |
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| --- | --- |
| **32.** | **The probability that a student will answer 6 multiple-choice questions correctly by random guessing is** /files/assess_files/096b8c35-0ce1-41b8-bbdd-6f78533b0831/2a4db62b-f7f4-4f85-a16a-af1513c98f4a.png**. How is this probability expressed in standard form?** |
|  |
|  | |  |  | | --- | --- | | **A.** | 0.0064 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 0.00064 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 0.000064 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 0.0000064 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **33.** | **One cubic inch is equal to 0.000016387 cubic meters. In scientific notation, which of the following numbers BEST approximates the number 0.000016387?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/2e4ad3ce-7c8b-4af8-921e-91b6e2875f70/3fdfeb6a-e097-4605-b76c-ee1226f05245.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/d2f8e675-1398-4117-a1dd-b7a41b7f008f/2dd5a7e6-e58d-4c7b-bc67-d999222f886b.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/3b116080-e9b6-4c62-9096-becf75557a73/ee8385be-4e0b-4f0e-9c84-95c467c57738.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/ab3fb3d6-6650-4bb4-a7cf-f10c3e63028f/9bcdb35b-d26f-4455-bb9b-6d037d8292a6.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **34.** | **In 2001, there were about 7.5 billion one-dollar bills in circulation. Which expression shows this approximate number in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/cef0f9b2-3a41-41ed-9380-8d2acedc13ac/7640494a-922e-40f2-b244-4f45379054cd.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/edfe5a33-0da5-451e-ac6f-1abda5212919/1efa363f-382a-48e8-add4-99f4f8691c4d.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/e3784d7d-811f-4fc6-b55a-15feae601906/d5a81e04-d6d1-4f13-8cc1-bb8732d73ffc.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/8d6c5579-fbf5-45e8-881d-92c311f3de0e/fffe506f-30e8-457f-92a9-6f5a693d1b0a.png | |
|  |  |
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| --- | --- |
| **35.** | **What is 0.00000826 in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/ab37a617-e700-4e87-a0de-be0c1a13180c/0408551a-e9a6-4785-af1b-ffcac1f346ee.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/d571a1d7-e51a-4f25-93c3-c09064a31aa5/b977ac08-d028-41df-990c-11dbc3ea5a5e.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/db522da4-e237-4dd6-8c01-646e9308d548/2c1c7a23-0eee-4d5e-a331-8352440f6e7e.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/a8325d7b-e7f8-4a24-9811-1d1314908230/e69dd8a9-1b11-43e8-a8d5-83931d17e163.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **36.** | **What is** /files/assess_files/7c9ab2d9-aab4-45b2-8f2d-b80273cec98d/115650da-9622-496f-82d7-d7747035585a.png **written in standard notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | 0.00000000873 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 0.0000000873 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 0.000000873 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 0.00000873 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **37.** | **What is** /files/assess_files/638227e7-25ed-4f4e-aa37-9060bb780c9b/fb4d3e85-bdc1-4368-b784-3d1fe22ba8db.png **in standard notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | 72,300,000,000 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 723,000,000,000 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 7,230,000,000,000 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 72,300,000,000,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **38.** | **What is** /files/assess_files/0f159c15-2188-4700-ba6e-0459d8b864ca/52f3d099-09aa-4353-bfa8-77879ef56ea2.png **in standard form?** |
|  |
|  | |  |  | | --- | --- | | **A.** | 0.0000903 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 0.00903 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 90,300 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 903,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **39.** | **What is 1,350,000 in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/d6316e2d-faa3-4f43-be74-99c71deb2d28/cae71705-9fc4-422f-ae7f-87b8a3c22dd2.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/4c44ab04-bca6-4bc7-81c0-936199b2a468/5b1ebb81-2b58-45c4-a68b-90f27d5ea2bd.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/48822b2f-2ab0-4b55-b04e-e3fba33d4ee2/2c717d52-0ec7-4054-b861-10b286f878e8.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/61cbe2fc-14d4-411b-9c31-5ce1004c8d96/b7b86c2d-d5a0-4aba-8171-5bac8b88ae39.png | |
|  |  |
|  |  |

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| --- | --- |
| **40.** | **What is 0.00058 written in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/0d950439-349f-4e61-8104-a770cd5644c8/b537025f-a6ea-4972-842b-9836ce2d92a9.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/19927d32-2618-4765-8c26-c0a6021ec552/c6e0f255-024a-407b-93e0-8c1354c754b3.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/d5b5358d-1cfa-4698-9ee5-ffb23fc715b6/747dbab5-bedc-45ba-bcc9-46c92dc65553.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/4c4ebe85-fcfe-4412-8e93-8bb44ac287d3/36c396e9-d930-439f-a4be-76a72e76cd6c.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **41.** | **What is 3,700,000 in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/dae8c87b-638e-480e-b2a5-dd93f1997ef8/5967963d-9519-417a-84b1-6638fc9888ac.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/7da372b6-5d80-46e7-86fc-98f280f37dbc/26138ea6-9244-42c2-9fcf-37b368f14534.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/b58ed7cb-769d-46a7-b3b5-b70e5a62815a/f6227cf4-6883-47ef-8451-7e08a274a0d3.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/cc575b6b-1eac-484c-88f3-9bc2bd2fb89f/2528969a-8a5f-4e41-a842-bc5641049334.png | |
|  |  |
|  |  |

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| --- | --- |
| **42.** | **The temperature at the core of the Sun is estimated to be more than 15,000,000 degrees Celsius. What is 15,000,000 written in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/0c69b55d-826e-451b-af89-268c112d9d95/91577702-91fb-42e5-8a7d-b529bdb36127.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/52f82d0b-ad41-4a14-9bd1-e9ed9b2c71d5/56148680-9a1a-40d3-b3b9-b61abcd7c353.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/e3d8307b-7ce8-4abb-af8b-6b34042ffb03/2ec9ab0d-8817-4215-9712-a8205d189a9b.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/283dc4d3-d9c4-4156-acc1-cf2aa4995dbb/83e6e630-fa8b-40c1-8705-575d44dd2545.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **43.** | **What is** /files/assess_files/c5120357-9597-48ab-81e8-cfd4e7424348/75127e3b-ba4d-46bd-ad6b-320f98ab31d3.png **in standard form?** |
|  |
|  | |  |  | | --- | --- | | **A.** | 0.002035 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 0.0002035 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 2,035 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 2,035,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **44.** | **What is** /files/assess_files/2daf5411-1c1e-4fc4-ad66-2f1edc901edd/39b1fb40-746c-4ab8-bfa5-e8dca22ce250.png |
|  |
|  | |  |  | | --- | --- | | **A.** | 0.0000641 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 0.00641 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 64,100 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 641,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **45.** | **What is** /files/assess_files/bc09fb9e-8db6-47c3-adfc-d7850983d363/d3edebad-fd04-481c-a158-5125c8c03897.png **in standard form?** |
|  |
|  | |  |  | | --- | --- | | **A.** | 0.00731 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 0.0731 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 731 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 73,100 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **46.** | **The average ant weighs about** /files/assess_files/fdf04271-1489-4235-ab7d-b734143d6dc2/472ba084-478d-4b35-9c8a-4f9f4568f406.png **kilogram. What is** /files/assess_files/fdf04271-1489-4235-ab7d-b734143d6dc2/5becb1fe-ee21-47d6-94fd-a2286a91e548.png **written in standard notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | 0.0001 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 0.00001 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 0.000001 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 0.0000001 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **47.** | **A small paper clip weighs about 0.0005 kilogram. What is 0.0005 written in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/0f367ff4-682e-4da8-9b28-d59d7886b93a/7c11020e-3a03-4c61-8cc5-1a594ca3e547.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/2c81d85f-8844-4b1e-84a0-7d9c0acbb2a7/032e8476-6ec4-4832-a8f3-85e44c2758fc.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/3324b114-9764-43aa-96d0-b66be60d2a5a/5a49bd1f-fa8a-4f70-9b70-483c8086ed85.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/a461c6a5-6f4a-4560-8933-aa019f90ca38/f7cfa454-7008-40d4-835a-2d547bd1ce84.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **48.** | **What is the number 0.00352 written in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/1ea3bd48-a138-4859-b98d-090688d59c3f/28173775-1dc0-41e4-8a05-9f5501954707.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/94bfe5e1-29b2-4254-9a23-04b32ed23ee7/1971c071-450d-42e3-8d45-a8fbf8f948e9.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/76adfaec-d796-46c4-b1c2-6bfc09141eb1/acacf660-2be0-471c-91c9-ef6b373b2101.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/8953d73e-43e6-483f-9293-c32472ad735d/1823bd9f-39b7-4349-97a1-434d060c1a8d.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **49.** | **Which number below is equivalent to 3.82 × 10−5?** |
|  |
|  | |  |  | | --- | --- | | **A.** | −191 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/c1c33176-0d9d-4442-9260-691ad5c7d615/aec75d82-3904-48d5-8986-8a2f9aa50206.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/b59a6cf0-dd45-4d07-8698-37e8c3f23e95/8d990513-577c-4340-95be-754e636e36d7.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/636b0509-9ea2-41d1-a7dd-fa34cd0b9fab/94296c12-1396-4d03-8c9b-78ed8fef423a.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **50.** | **What number below represents 457,000,000 using scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/0d53cda7-9022-4376-9706-054815681d4d/a52b0bd0-7c5e-404b-8254-a32fd4f7b85d.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/72092a30-cf80-468b-ba30-2d629ab3945a/d2fb2868-cbb6-4a0a-983e-05b9994dc13b.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/0065d4f9-1589-46c8-9e72-43a0d7d47b5d/19607598-fe57-4d4c-990b-20d8d54ec5c1.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/fbe93290-84b5-4beb-93ca-07c60b5cfa48/7463361d-fa68-4a5d-8acd-9481905515a0.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **51.** | **Which number below correctly represents 0.0005682 using scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/340c9f1f-44ea-4a10-85a0-fe21c2eabce2/e9fb6fc1-f603-443c-813b-162c85bd9be5.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/411c84f8-4245-4132-b46b-3eeae25fb934/6793ccc3-6b5a-40cf-8920-e2780808a222.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/60eb1753-f621-4efd-b97f-44e7feeb67d5/78a8ef73-da12-4108-8659-1045b45e44a5.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/3591a72b-b332-4c3b-8531-0b550b8444d5/92b46f86-90ac-4a7a-a640-5ec982ac43f7.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **52.** | **Which is scientific notation for 12,300,000,000?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/5183af20-aef8-4674-ae86-d6516e8b3d53/5de8867f-565f-46be-9753-6546ad6e05db.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/bb8dde26-40c5-45e9-842f-55855b9712f1/77530367-0c50-4038-8329-f15f7d98159a.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/0dad9597-5469-490e-bd17-bc1ac59e5d14/60f89124-9e01-42fc-84a2-dedfe87ae1db.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/c4de5498-6ad8-4d5f-9236-a1f941bfdb3e/a2e4853d-2b10-4da2-bd39-32fb7268b58c.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **53.** | **Which is equivalent to 1,800,000?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/835a6e9c-d72f-4da9-9405-b36ef89b7a49/5438a564-4f12-4d31-9f4a-4192f235e6cb.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/211a10da-bcc7-49d2-9eb6-e2081142c236/0f762399-6569-453d-8f15-a06117cd450b.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/7d2eebf9-4629-4d17-aa9f-0a167737a859/d37987d4-a107-42af-adb0-c76d12d0b620.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/18fd3c53-6641-4158-a6c4-7034b36a1e1b/3d63eb91-1f1f-41e5-8530-d512461edb7c.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **54.** | **A businessman traveled** /files/assess_files/761d3062-55c2-4002-a2a4-8ee619335a5a/d5105dd2-28dc-4145-9ba4-b2dce4bcc4af.png **miles this year. Which represents the number of miles he traveled?** |
|  |
|  | |  |  | | --- | --- | | **A.** | 2300 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 23,000 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 230,000 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 2,300,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **55.** | **Which is equivalent to** /files/assess_files/2f6d03dc-1eb3-437b-b24c-5e894f53f573/86465b93-e9f0-4b4b-b74e-a7d213b01fcc.png |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/917b8127-956a-43ad-9d99-795b4ac738d1/d155b91b-4c47-46bf-b7af-69801345a70a.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/0c5628bb-aa28-46d8-8069-fa368c011d14/98262c1b-4e6a-45d9-bdb0-9dff0c416f6a.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/cce85c8f-4966-4294-af67-38e509455303/4c6f90ce-35be-4561-8c16-b2677fd94a72.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/98f9b0d5-1452-45c8-b083-fe8799404671/1755e18d-cab2-4fd7-bd65-3be57431df24.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **56.** | **In one year 10,257,400,000 pennies were produced. Which is the BEST estimate, in scientific notation, of the number of pennies produced?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/0c8baa8f-d0d0-446c-9310-34bdb57d1640/8121df99-c3da-452d-a113-380bb1a6c58d.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/18bc4178-498a-4a34-b9c3-7691b56cba11/cab13b41-04bf-40dd-bfbd-1a4e367a23a1.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/e92c67ca-2f73-4b0f-b0f3-1b25f0e8f959/6d46b604-3c92-4151-bcbf-8ec44c1730f9.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/53e66cc9-0a60-4bd7-baf9-f1d32c329882/7c2285d0-005d-4097-aa6e-6bcd6865a294.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **57.** | **At its closest point, Neptune is 2,680,000,000 miles from Earth. What is this number in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/912c25eb-8f60-4208-bd6c-7019e3b70fa3/7c179cd6-5881-4739-a6ff-7fb20c362ba7.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/0d6a8808-0867-40ef-b8ac-a10ef6109f54/9bd16f1b-fd95-4b31-9e01-db5bacc4676a.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/9e8111d5-11a3-4d19-8b67-7b22815397ab/d95a277b-c9a7-40eb-af3e-93ac2e965e40.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/90a6df36-2f93-4aea-b9cc-8aa430cfa235/964a1929-0896-4d41-a29d-3b88434b5d1c.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **58.** | **A colony of bacteria in a petri dish grew to a population of** /files/assess_files/ae679973-0702-4659-a512-3d9b1ec569ff/989db5c0-2403-4d61-871d-944071ba849d.png **What is the standard form of** /files/assess_files/ae679973-0702-4659-a512-3d9b1ec569ff/8af4a09e-7b14-4f8e-a8a0-18210c0e8e9f.png |
|  |
|  | |  |  | | --- | --- | | **A.** | 40,000 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 400,000 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 4,000,000 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 40,000,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **59.** | **Which expression shows 63 million written in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/d83ad677-8d5d-4890-b9fc-5c113a27ede9/b567286e-7fe0-490a-bd17-4817eecfda78.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/08e1602e-d860-4048-88d0-3cf0098c4e28/c7f7d8a6-5dbb-435c-ae25-f1de8f6210e5.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/fcfa48f0-b9a1-408a-ad1d-a76b63706cdc/7e9998b2-12d9-4657-b4e3-5c44acbd526e.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/15e02e74-7cf8-4287-8a57-97607d54cb10/756bd7b1-cb7a-42a1-98c6-ae05b9357f51.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **60.** | **What is** /files/assess_files/65b6e2da-8ef5-4e8e-b411-8cb05c744b85/26ee795d-587d-4fc0-b84e-9c0d6c6153f9.png **in standard form?** |
|  |
|  | |  |  | | --- | --- | | **A.** | 5064 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 506.4 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 0.005064 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 0.0005064 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **61.** | **In 2050, the world population is expected to be about** /files/assess_files/889d5e5c-a9a5-40c1-83c2-4b8d222f1073/ca812b7f-4270-4897-9338-95a88a080459.png **What is this number in standard notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | 910,000,000 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 9,100,000,000 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 91,000,000,000 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 910,000,000,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **62.** | **The world’s smallest guitar measures about 0.000010 meters and was made by researchers at Cornell University. What is the proper expression of this measurement in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/e55ee33d-1b74-4e73-863e-d631ec4d7357/573537eb-d687-4ed6-8dc2-33dcc0f92dc5.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/dd5c4819-2cc1-4737-956c-17258ddafe87/a55d8912-ec4b-42a3-982c-bd057246f2b7.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/b73a7c1d-d12d-4d4d-8d46-8ae17d830070/d8524bbc-b9f7-4291-bfd3-0570d60d7088.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/52106fc2-3a2e-44d0-87da-d395972a6288/1ee2a233-39a2-4d41-b112-dce59f3a2aa8.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **63.** | **The Sun’s mass is about 333,000 times the Earth’s mass. What is 333,000 expressed in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/00d57603-e0f0-43dd-b724-1b9442d35cd6/e4b1ab15-c4c4-4924-b152-830dc0b82e9b.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/59d1538b-d035-490c-aef7-c05a88c97ab0/bd104b8d-b90f-4b0b-8c9f-b25c0b378b40.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/76fa9cad-6031-4167-aaa0-ddef8ef6ab10/ffa42568-59a1-42bd-8082-1aa6e99a9d4f.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/4e7738a4-dc91-4540-8cf6-0a44f3085eaf/d9f4f0a4-7cb3-4ee7-80fc-c447252c8305.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **64.** | **Which of the following is equivalent to 0.00000073?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/b1c77f89-6c50-4166-85b9-6c01170b2d43/0f7eef2b-062e-40ba-bac9-9b7013c9714e.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/03491d74-8d6b-4be8-a18f-7e39c5a68e35/ec109129-78be-4b19-914f-e1facbf65147.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/cca452cc-859b-4cd7-b560-ccfd5d4a4624/a47faaa1-db1c-4fc3-8b45-3bef4054868b.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/3f4c86fb-4076-4466-b61b-35272ce91337/ac8a2c67-26f8-4139-bb4a-ed5ae5dba3aa.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **65.** | **Maria learned in science class that the closest distance between the Moon and Earth is 221,436 miles. In scientific notation, which expression BEST approximates this distance?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/2312fd8f-91fe-45a1-bce8-abf7dce94aed/842a0ba5-c0ca-4ddd-b43f-3fb587658524.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/793e9533-c25a-4e4b-9d74-63a5f714e459/4fafee06-a099-4000-baf2-bf142f3c00f9.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/aa760a33-087e-4c03-ac2c-72cff429f049/4d46e66a-35b1-4bbf-850f-5479aed4171c.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/ed947011-8da6-40be-a075-02195fefeba1/1ec5d9df-79ce-4de2-a502-2e64aef7e35e.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **66.** | **Mars is about 47 million miles from Earth. Which expression shows this approximate distance in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/ce0394a2-f01b-494b-8dbb-dff8c659dbb5/b4a71269-8d7f-4cc8-a1ec-0b8ab3e88b61.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/bf406174-2dd6-478f-b767-9997727d1834/173edf68-0676-4c33-bdba-0ef810cc6520.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/235e01df-7db8-4c30-8469-a41a5e8a5688/1be319b6-9312-45a8-b880-cd9bdf4a593d.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/7cd60256-ee05-4e27-9859-7e496eb2ab5f/4d51a9fe-f964-4151-93fa-002fca5f079e.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **67.** | **Which number is equal to** /files/assess_files/d1e9fa2f-1e04-4394-b1aa-47ee3bfcc6af/8c12cd4e-2973-41b8-bcdb-20c1ae12d810.png |
|  |
|  | |  |  | | --- | --- | | **A.** | 480,000 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 48,000 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 0.00048 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 0.000048 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **68.** | **Guillermo measured a microbe to be 0.0000067 meters across. What is 0.0000067 written in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/74759da2-c510-4c1a-a4fc-f4eda3c6f58b/2e8f99d9-763d-4b08-af84-5f0755e3df39.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/5d7b777a-2c3e-4a10-ab1e-af77723dee6a/46357122-a5a0-48ee-b36b-db207c72b112.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/7904e0bb-f22a-42e0-a352-f4821f8536d7/d7b3df44-f3c2-4537-b86c-cf6dc28925db.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/f2f03d75-d850-43e2-a094-74eaed2e1c13/e9ba44c6-7fbd-4fea-98bc-5659fc51f0d6.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **69.** | **The area of an office building is 1,788,465 square feet. In scientific notation, which expression BEST approximates the area of the building?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/ce3f8a2d-7e3c-4500-948b-5e6ec9c69ae4/ac9ffb69-f08a-4dd6-a7ae-7759105a140f.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/c9568a5e-fa7f-40fd-98c0-b4b4a23ef5ac/5c8329c4-1e60-4b12-9886-c744fd349a81.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/c41eeabd-4a15-4172-ab77-b95677a53bac/2b06d6de-d41e-4255-a641-8d944244bd23.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/8baf9867-bba5-47b9-8d7e-0b07af17299e/031b5b12-2f25-4158-a487-5205d0267ef3.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **70.** | **The length of Florida’s coastline is approximately** /files/assess_files/5cf486b8-73b5-42e0-b3ce-92c537083587/19dfd656-6b2c-4de0-8967-d2eb47a45ecb.png **miles. Which value is equivalent to this number of miles?** |
|  |
|  | |  |  | | --- | --- | | **A.** | 13,500.00 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 1350.00 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 1035.00 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 1000.35 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **71.** | **Alberta measured a microscopic organism to be 0.000032 centimeter in diameter. What is 0.000032 written in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/ad771ab5-d346-41c9-a9f4-e1a8940f1374/2b3cfb82-2d5a-450a-ba63-63597c8b80c2.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/935119ee-f3b3-44af-929b-435a54a744c3/34e81b07-512b-47d8-b6e6-3e179eea0d6e.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/a247796a-0d8f-4ee4-a024-933e552bf524/8d8ba52b-9044-4cab-ac9a-e188b7214d06.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/4404e373-66c8-478a-bb4f-7b75f79c41fa/f0d7078c-49d9-4aa3-b353-8abefe4bea94.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **72.** | **Which number is equivalent to** /files/assess_files/17f318c2-7f8e-4dcf-bed8-1a980741c210/ea2e92dd-89ed-4d77-b8bf-19f82d62d400.png |
|  |
|  | |  |  | | --- | --- | | **A.** | 22,300 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 223,000 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 2,230,000 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 22,300,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **73.** | **Barnard’s Star is approximately 35,133 billion miles from Earth. What is 35,133 billion in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/337e6519-9414-4b25-bb48-6dc54e1bfd78/190a1732-943f-4739-a0a2-ab181a63a75b.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/08eeb9de-2b5a-4ba8-bc44-a0681ccd0758/7469f9ce-2ea8-47a0-a3d6-552edb5b6ed3.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/3b8d395e-3504-404d-af39-cd6d5b8a8801/0fcc59bd-1b4d-40a3-8671-484e204554da.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/62f1c96d-02da-49c4-ab47-a9d6ba32e419/74e9bd1b-a91c-4c11-9131-cad43e14f50e.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **74.** | **About 602,000,000 tons of corn are harvested in the world each year. What is 602,000,000 written in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/c4743a22-e8f5-4c36-ba80-0796de10d5d5/915f3323-cf3e-41f6-b400-7db8e591be49.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/088c28e1-ff36-498f-8881-5c95244ccd87/ac81bb1d-6464-4ea6-8a09-f0d717da8c84.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/0fbcf684-d313-48fb-ae77-5163c712459b/094579e1-f24c-41a2-b508-a9c1403af9b2.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/73fd832e-fdbc-4dac-a5e2-f0f1d6bbdc9a/7f4114f4-e8c6-4e8a-a877-30528447008a.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **75.** | **The Tarbela Dam in Pakistan can hold 5,244,000,000 cubic feet of water. What is 5,244,000,000 written in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/92b21526-7089-47b9-876f-639935055f7f/088d1a97-db83-4bee-b3d9-df92a667569b.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/822a14f9-6ed1-4179-ba24-1674d08ef423/15fc9cc0-0e7a-48b8-8f36-2e8a1d26de2c.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/d7b0a974-0e19-4a87-a881-c504d602f002/51069c21-abf1-427a-b455-51f9e91f51b7.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/b506f983-e5f6-49eb-9538-1e6ab3c6e15a/26dd772c-c450-4efe-8a09-10235a2deac6.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **76.** | **There are 525,600 minutes in one regular year. Which expression represents this number in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/b733f3bb-bdf8-488b-87c9-93b0887c347b/f6986622-69f9-4b5c-9d46-78d4e5b82603.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/06faa983-f465-415e-be27-549d8071f793/d803db9f-aee0-4247-bbb1-7b560311e654.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/a3ffbe5c-ce3a-4128-99e8-40e94e744091/47ef371f-663b-49f7-a426-7d9655a281f5.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/c0e3ca94-3ba3-4200-9410-14373801bb60/69c1c047-2aad-4ab5-a546-3e2016740d9f.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **77.** | **Which of the following shows 8,350,000 in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/997d6bc2-134d-4ad0-950b-68ad40cc3d8d/f279b686-4606-4472-9ea2-cd30c019a9f9.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/8ff54448-cf10-46ab-8e87-c5980efb20b4/05106d58-375a-449b-bc54-3fc846da838e.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/942e309f-e283-445a-afd4-300dbfa68eb2/a9f5d51f-973b-43b9-99fa-89e8546add63.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/41b18dbc-4922-455c-b73a-30171e0aaaa6/42a19deb-c1db-4bf8-8f8a-c331030425e4.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **78.** | **Which of the following represents the standard form of** /files/assess_files/fcef8f88-f71b-4f8b-b3a4-253f5118c9c0/2e5114e7-d4ee-4d8c-a498-e8f6c72992cb.png |
|  |
|  | |  |  | | --- | --- | | **A.** | 0.000031 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 0.00031 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 310,000 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 3,100,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **79.** | **The Indian Ocean covers about** /files/assess_files/e2956cc0-81d4-47f7-af09-a7b269a5a6cc/dd924403-e614-402e-bc44-c74548f9d449.png **square miles. Which numeral is equivalent to** /files/assess_files/e2956cc0-81d4-47f7-af09-a7b269a5a6cc/28325ff8-90d7-44c2-bf77-69ecafe5ac83.png |
|  |
|  | |  |  | | --- | --- | | **A.** | 2,530,000 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 25,300,000 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 253,000,000 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 2,530,000,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **80.** | **Which expression shows 808,500 written in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/c90c717d-e4ee-480a-b1b3-6374d4824f11/ab35e179-5792-4517-8f8c-aab17c204fb2.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/c4bb1785-37c7-411a-923f-97aa0d1a018b/3b7e50a6-cda9-4fb8-9d70-04e53cc430c7.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/2b91de4f-df60-4440-8a4f-c4b453a52fa5/d344744c-af31-4702-927a-1a92662910b8.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/48ae5b6f-c7dc-4f0e-b3e4-f1a8ddbcb36e/c28b6587-366e-4a75-84be-a022d3036ba9.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **81.** | **Which expression shows 41,250 written in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/5e444db7-3d05-41c5-aeb0-d05750c7ee7d/46763191-b732-4b17-96d1-a04a2c0bfe01.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/a5b3598e-29e5-42f4-acde-727de2336522/867f23d4-100c-4c50-81c1-51d9ee9665d3.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/c85220e8-313c-4510-8772-fafd7e0ddb22/cd282721-8587-44a2-af3b-cb2809449d39.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/0a3fc66c-9944-46e6-86d5-430f7b9f6daf/be1f49cc-178c-4ba2-a5a5-a9eef552e27b.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **82.** | **Which expression shows 382,000 written in scientific notation?** |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/b905e930-7ffc-4e12-8672-f843963834af/f5a95139-55ba-45cc-8190-906008b180fa.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/83602ddb-40fd-4ea3-9c55-a5ff4219d16f/8a5bf175-0294-4582-91ad-c15e4a0940ae.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/acd2a711-df60-4b71-af69-e0fa5bb6a729/0983396d-cb06-442c-9ca4-39c86abef29e.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/f14bd68d-97fb-4e00-9e5e-74e1c78309ae/8d8a7107-3e88-4be9-9e08-93292a658a90.png | |
|  |  |
|  |  |

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| --- | --- |
| **83.** | In the expressions, *x* and *y* represent positive integers.  expression one: 2 • 10*x*  expression two: 4 • 10*x* + *y*  The value of expression two is 20,000 times greater than the value of expression one. What is the value of  *y*  ? |
|  |
|  | |  |  | | --- | --- | | **A.** | 3 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 4 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 5 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 6 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **84.** | The average distance from Neptune to the sun is about 2.8 × 109 miles.The average distance from Venus to the sun is about 6.7 × 107 miles. ***About*** how many times farther is Neptune from the sun than Venus is from the sun? |
|  |
|  | |  |  | | --- | --- | | **A.** | 40 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 42 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 46 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 50 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **85.** | What is 0.00000000782 in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 7.82 × 10–9 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 7.82 × 10–8 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 7.82 × 108 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 7.82 × 109 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **86.** | The diameter of Jupiter is about 30 times greater than the diameter of Mercury. If Mercury’s diameter is about 3.0 × 103 miles, what is the ***approximate*** diameter of Jupiter? |
|  |
|  | |  |  | | --- | --- | | **A.** | 6.0 × 103 miles | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 9.0 × 103 miles | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 6.0 × 104 miles | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 9.0 × 104 miles | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **87.** | The diameter of Mercury is about 3.0 × 103 miles. The diameter of Saturn is about 7.5 × 104 miles. Which statement below is true? |
|  |
|  | |  |  | | --- | --- | | **A.** | The diameter of Mercury is about 2.5 times greater than the diameter of Saturn. | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | The diameter of Saturn is about 2.5 times greater than the diameter of Mercury. | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | The diameter of Mercury is about 25 times greater than the diameter of Saturn. | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | The diameter of Saturn is about 25 times greater than the diameter of Mercury. | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **88.** | When fully grown, a giraffe is approximately 4.5 meters in size. A fly is approximately 9 × 10–3 meters in size. ***About*** how many times smaller is the fly than the giraffe? |
|  |
|  | |  |  | | --- | --- | | **A.** | 20 times smaller | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 50 times smaller | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 200 times smaller | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 500 times smaller | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **89.** | The surface area of the Pacific Ocean is about 165,000,000 square kilometers. Which choice is equivalent to this surface area? |
|  |
|  | |  |  | | --- | --- | | **A.** | 1.65 × 106 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 1.65 × 107 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 1.65 × 108 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 1.65 × 109 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **90.** | A low energy radio wave has a wavelength of about 2.87 × 103 meters. A high energy gamma ray wave has a wavelength of 3.2 × 10–12 meters. Which statement is true? |
|  |
|  | |  |  | | --- | --- | | **A.** | The gamma ray wave is about 109 times shorter than the radio wave. | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | The radio wave is about 109 times shorter than the gamma ray wave. | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | The gamma ray wave is about 1015 times shorter than the radio wave. | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | The radio wave is about 1015 times shorter than the gamma ray wave. | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **91.** | The average size of an atom is 1 × 10–10 meter. The average size of a plant cell is 1.2 × 10–5 meter. ***About*** how many times smaller is the average atom than the average plant cell? |
|  |
|  | |  |  | | --- | --- | | **A.** | 120,000 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 12,000 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 1,200 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 120 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **92.** | The circumference of the sun is about 2.7 × 106 miles. The circumference of the moon is about 6.78 × 103 miles. ***About*** how many times larger is the circumference of the sun than the circumference of the moon? |
|  |
|  | |  |  | | --- | --- | | **A.** | 250 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 300 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 350 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 400 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **93.** | What is the standard form of 6.5 × 10–3? |
|  |
|  | |  |  | | --- | --- | | **A.** | 0.65 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 0.065 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 0.0065 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 0.00065 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **94.** | Which choice is equivalent to 2.3 × 103? |
|  |
|  | |  |  | | --- | --- | | **A.** | 23 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 230 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 2,300 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 23,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **95.** | The population of New York is about 8.2 × 106 people. The population of Berkeley is about 1.1 × 105. ***About*** how many times larger is the population of New York than the population of Berkeley? |
|  |
|  | |  |  | | --- | --- | | **A.** | 15 times larger | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 70 times larger | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 75 times larger | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 150 times larger | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **96.** | Which is equivalent to 3.2 × 103? |
|  |
|  | |  |  | | --- | --- | | **A.** | 320 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 3,200 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 32,000 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 320,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **97.** | What is 112,000 expressed in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 1.12 × 103 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 1.12 × 104 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 1.12 × 105 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 1.12 × 106 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **98.** | A cell measures 0.0001 mm. How is this number written in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 1 × 10–4 mm | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 1 × 10–3 mm | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 1 × 103 mm | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 1 × 104 mm | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **99.** | In January of 2000, the United States had a federal outstanding debt of 5.8 trillion dollars. By January of 2012, the federal outstanding debt had risen to 15.2 trillion dollars. How much more debt, in dollars, was accumulated in those twelve years? |
|  |
|  | |  |  | | --- | --- | | **A.** | 2.6 × 109 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 9.4 × 109 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 2.6 × 1012 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 9.4 × 1012 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **100.** | The area of Texas is about half the area of Alaska. Alaska has an area of approximately 5.6 × 105 square miles. What is the ***approximate*** area of Texas? |
|  |
|  | |  |  | | --- | --- | | **A.** | 2.8 × 105 square miles | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 1.1 × 105 square miles | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 5.6 × 102.5 square miles | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 2.8 × 102.5 square miles | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **101.** | North Carolina has about 1.4 × 106 students enrolled in public schools. The United States has about 2.9 × 108 students enrolled in public schools. ***About*** how many times larger is the number of students enrolled in public schools in the United States than in North Carolina? |
|  |
|  | |  |  | | --- | --- | | **A.** | 20 times larger | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 50 times larger | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 200 times larger | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 500 times larger | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **102.** | Which expression is equivalent to 3 × 10–3? |
|  |
|  | |  |  | | --- | --- | | **A.** | –0.0003 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | –0.003 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 0.0003 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 0.003 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **103.** | Suppose the average weight of an ant is about 2.9 × 10–3 grams and the average weight of a mouse is about 2.2 × 102 grams. ***About*** how many times greater is the average weight of a mouse than the average weight of an ant? |
|  |
|  | |  |  | | --- | --- | | **A.** | 1,300 times | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 7,600 times | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 13,000 times | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 76,000 times | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **104.** | In 2013, the United States budget deficit was about 680 billion dollars. How is this number written in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 6.8 × 106 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 6.8 × 108 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 6.8 × 109 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 6.8 × 1011 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **105.** | Mount Everest has an elevation of about 8.85 × 103 meters. Kitty Hawk, North Carolina has an elevation of about 2.0 meters. ***About*** how many times greater is the elevation of Mount Everest than the elevation of Kitty Hawk? |
|  |
|  | |  |  | | --- | --- | | **A.** | 4.4 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 44 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 440 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 4,400 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **106.** | A virus has a diameter of approximately 8 × 10–5 mm. A bacterium has a diameter of approximately 7.5 × 10–4 mm.***About*** how many times larger is the diameter of the bacterium than the diameter of the virus? |
|  |
|  | |  |  | | --- | --- | | **A.** | 6 × 1021 times larger | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 9.4 × 100 times larger | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 1.1 × 10–1 times larger | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 6 × 10–8 times larger | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **107.** | The land area of the United States is approximately 9,630,000 square kilometers. How is this number written in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 9.63 × 104 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 9.63 × 105 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 9.63 × 106 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 9.63 × 107 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **108.** | An adult white rhino weighs approximately 2.3 • 106 grams. A newborn white rhino weighs approximately 6.0 • 104 grams. ***About*** how many times heavier is the adult white rhino than the newborn white rhino? |
|  |
|  | |  |  | | --- | --- | | **A.** | 10 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 40 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 140 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 400 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **109.** | The half-life of potassium is 1.3 × 109 years. The half-life of carbon is 5.73 × 103 years. ***Approximately*** how many times shorter is the half-life of carbon than potassium? |
|  |
|  | |  |  | | --- | --- | | **A.** | 4.4 × 10–6 times shorter | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 2.3 × 105 times shorter | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 2.3 × 1011 times shorter | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 4.4 × 1012 times shorter | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **110.** | The mass of the moon is about 7.3 × 1022 kg. The mass of Earth is about 6.0 × 1024 kg. ***About*** how many times more mass is the Earth than the moon? |
|  |
|  | |  |  | | --- | --- | | **A.** | 2 times more | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 44 times more | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 82 times more | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 123 times more | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **111.** | One of the fastest trains in the world can travel at a speed of 3.16 × 105 inches per minute. How is this number written in standard form? |
|  |
|  | |  |  | | --- | --- | | **A.** | 31,600 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 316,000 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 3,160,000 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 31,600,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **112.** | James is 6 feet tall. At its highest point, Mt. Everest is about 2.9 × 104 feet tall. ***About*** how many times taller is Mt. Everest than James? |
|  |
|  | |  |  | | --- | --- | | **A.** | 48 times taller | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 480 times taller | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 4,800 times taller | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 48,000 times taller | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **113.** | The circumference of Saturn is about 379,000 kilometers. The circumference of the Earth is about 4 × 104 kilometers. ***Approximately*** how many times as large is Saturn’s circumference than Earth’s circumference? |
|  |
|  | |  |  | | --- | --- | | **A.** | 9.5 times as large | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 11 times as large | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 95 times as large | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 110 times as large | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **114.** | The mass of a proton is about 1.7 × 10–27 kilograms. The mass of an electron is about 9.1 × 10–31 kilograms. ***Approximately*** how many times larger is the mass of the proton than the mass of the electron? |
|  |
|  | |  |  | | --- | --- | | **A.** | 187 times larger | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 535 times larger | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 1,870 times larger | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 5,350 times larger | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **115.** | The population of Arborville is approximately 2.1 × 103. The population of Sandy City is approximately 8.3 × 105. ***About*** how many times as large is the population of Sandy City than Arborville? |
|  |
|  | |  |  | | --- | --- | | **A.** | 25 times as large | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 40 times as large | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 250 times as large | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 400 times as large | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **116.** | The distance from Earth to the star Alpha Centauri is about 25.6 trillion miles. How is this number written in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 2.56 × 109 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 2.56 × 1010 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 2.56 × 1012 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 2.56 × 1013 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **117.** | The fastest airplane in the world has a speed of about 1.1 × 107 meters per hour. The fastest flying bird in the world has a speed of about 1.7 × 105 meters per hour. ***About*** how many times faster is the airplane than the bird? |
|  |
|  | |  |  | | --- | --- | | **A.** | 1.5 times faster | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 6.5 times faster | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 15 times faster | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 65 times faster | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **118.** | The mass of the planet Saturn is about 5.7 × 1026 kg, and the mass of the Earth’s moon is about 7.41 × 1022 kg. ***About*** how many times greater is the mass of the planet Saturn than the mass of the Earth’s moon? |
|  |
|  | |  |  | | --- | --- | | **A.** | 1.3 × 103 times greater | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 7.7 × 103 times greater | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 1.3 × 104 times greater | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 7.7 × 104 times greater | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **119.** | The average adult has about 7 × 109 white blood cells and about 4.3 × 1012 red blood cells. ***About*** how many times more red blood cells does the average adult have than white blood cells? |
|  |
|  | |  |  | | --- | --- | | **A.** | 6 times more | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 61 times more | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 614 times more | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 6,140 times more | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **120.** | A virus has a diameter of about 2.0 × 10–8 mm. A bacteria has a diameter of about 2.0 × 10–6 mm. How does the size of the bacteria compare to the size of the virus? |
|  |
|  | |  |  | | --- | --- | | **A.** | The bacteria is about 10 times smaller. | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | The bacteria is about 10 times larger. | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | The bacteria is about 100 times smaller. | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | The bacteria is about 100 times larger. | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **121.** | A race car traveled at a speed of 100 meters per second. The speed of light can be expressed as 3 × 108 meters per second. ***Approximately*** how much faster is the speed of light than the race car? |
|  |
|  | |  |  | | --- | --- | | **A.** | 30,000 times faster | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 300,000 times faster | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 3,000,000 times faster | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 30,000,000 times faster | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **122.** | Last year, 71,028 people attended the Superbowl. If each person spent an average of $50.00 on food and drinks, ***about*** how much money did the people spend on food and drinks at the Superbowl? |
|  |
|  | |  |  | | --- | --- | | **A.** | 3.5 × 104 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 3.5 × 105 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 3.5 × 106 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 3.5 × 107 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **123.** | The approximate land area of China is 3.7 million square miles. How is this number written in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 3.7 × 105 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 3.7 × 106 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 3.7 × 107 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 3.7 × 108 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **124.** | The distance from Earth to the sun is 92,960,000 miles. What is this distance expressed in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 9.296 × 104 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 92.96 × 104 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 9.296 × 107 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 92.96 × 107 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **125.** | The speed of light is about 3.0 x 108 meters per second. The speed of sound at sea level is about 3.0 x 102 meters per second. ***About*** how many times faster is the speed of light than sound? |
|  |
|  | |  |  | | --- | --- | | **A.** | 1,000 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 6,000 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 1,000,000 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 3,000,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **126.** | Mercury is about 3.6 × 107 miles from the Sun. Venus is about 6.7 × 107 miles from the Sun. ***About*** how many times farther is Venus from the Sun than Mercury? |
|  |
|  | |  |  | | --- | --- | | **A.** | 1.5 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 2 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 2.5 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 3 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **127.** | The population of Smithville is about 2.6 × 105. The population of Jonesville is about 1.04 × 106. ***About*** how many times larger is the population of Jonesville than Smithville? |
|  |
|  | |  |  | | --- | --- | | **A.** | 2 times larger | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 4 times larger | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 10 times larger | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 20 times larger | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **128.** | What is 8.34 × 105 in standard form? |
|  |
|  | |  |  | | --- | --- | | **A.** | 83,400,000 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 834,000 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 83,400 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 0.0000834 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **129.** | A field is 1.2 x 103 yards long. A garden in the field is 0.4 x 102 yards long. How many times shorter is the length of the garden than the length of the field? |
|  |
|  | |  |  | | --- | --- | | **A.** | 3 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 8 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 30 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 80 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **130.** | In 1900, the population of a state was approximately 1.9 × 105. In 2000, the population of the same state was 9.1 × 106. ***About*** how many times greater was the population of the state in 2000 than it was in 1900? |
|  |
|  | |  |  | | --- | --- | | **A.** | 2 times greater | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 5 times greater | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 20 times greater | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 50 times greater | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **131.** | The diameter of a carbon atom is about 1.0 x 10–10 meters. The diameter of a hydrogen atom is about 5.3 x 10–11 meters. ***About*** how many times larger is the diameter of the carbon atom than the diameter of the hydrogen atom? |
|  |
|  | |  |  | | --- | --- | | **A.** | 2 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 5 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 20 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 50 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **132.** | What is 0.000426 in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 4.26 × 10–3 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 4.26 × 10–4 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 4.26 × 10–5 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 4.26 × 10–6 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **133.** | The population of Griffin is about 4.8 × 103. The population of Oakdale is about 1.9 × 105. ***About*** how many times larger is the population of Oakdale than Griffin? |
|  |
|  | |  |  | | --- | --- | | **A.** | 4 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 25 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 40 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 250 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **134.** | An adult red panda weighs about 5.0 × 103 grams. An adult giant panda weighs about 1.5 × 105 grams. ***About*** how many times larger is the giant panda than the red panda? |
|  |
|  | |  |  | | --- | --- | | **A.** | 2 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 3 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 20 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 30 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **135.** | A jet fighter is capable of reaching speeds up to 1.5 × 103 miles per hour. A typical passenger plane can reach speeds of approximately 5.0 × 102 miles per hour.  ***About*** how many times faster can the jet fighter travel per hour than the typical passenger plane? |
|  |
|  | |  |  | | --- | --- | | **A.** | 3 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 10 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 30 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 75 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **136.** | The distance from the Sun to Earth is 1.6 × 1011 meters and the distance from Mars to Earth is 5.5 × 1010 meters. ***About*** how many times farther is the distance from the Sun to Earth than the distance from Mars to Earth? |
|  |
|  | |  |  | | --- | --- | | **A.** | 2 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 3 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 20 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 30 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **137.** | A planet’s average distance from the sun is 5.7 × 107 km. A second planet’s average distance from the sun is 1.4 × 109 km. Which statement is true? |
|  |
|  | |  |  | | --- | --- | | **A.** | The first planet is about 5 times farther from the sun than the second planet. | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | The first planet is about 25 times farther from the sun than the second planet. | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | The second planet is about 5 times farther from the sun than the first planet. | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | The second planet is about 25 times farther from the sun than the first planet. | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **138.** | Mike is about 1.6 meters tall. A rock is about 2.3 × 10–3 meters tall. ***About*** how many times shorter is the rock compared to Mike? |
|  |
|  | |  |  | | --- | --- | | **A.** | 1,400 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 700 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 140 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 70 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **139.** | The population of City M is about 3.3 × 105. The population of City N is about 1.7 × 106. ***Approximately*** how many times larger is the population of City N than the population of City M? |
|  |
|  | |  |  | | --- | --- | | **A.** | 2 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 5 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 20 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 50 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **140.** | In 1900, the population of a city was approximately 2.3 × 104. In 2000, the population of the same city was about 400 times greater than the population in 1900. What was the ***approximate*** population of the city in 2000? |
|  |
|  | |  |  | | --- | --- | | **A.** | 9.2 × 106 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 9.2 × 105 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 5.75 × 106 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 5.75 × 105 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **141.** | What is 0.0000085 written in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 8.5 × 10-5 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 8.5 × 10–6 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 8.5 × 10-7 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 8.5 × 10-8 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **142.** | Light travels about 300,000 km per second. How is this speed written in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 3.0 × 103 km per second | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 3.0 × 104 km per second | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 3.0 × 105 km per second | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 3.0 × 106 km per second | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **143.** | How is 312,000,000 expressed in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 3.12 × 109 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 3.12 × 108 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 3.12 × 107 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 3.12 × 106 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **144.** | What is the standard form of 9.12 × 106? |
|  |
|  | |  |  | | --- | --- | | **A.** | 912,000,000 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 91,200,000 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 9,120,000 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 912,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **145.** | What is 3.024 × 10–4 written in standard form? |
|  |
|  | |  |  | | --- | --- | | **A.** | –30,240 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | –3,024 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 0.00003024 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 0.0003024 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **146.** | The average distance from Mars to the sun is 228 million km. How is this distance written in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 2.28 × 109 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 2.28 × 108 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 2.28 × 107 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 2.28 × 106 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **147.** | Neptune is approximately 4,400,000,000 km from the Earth. How is this number written in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 4.4 × 107 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 4.4 × 108 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 4.4 × 109 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 4.4 × 1010 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **148.** | Scientists have discovered evidence of three new black holes within 50 million light years of Earth. Which shows 50 million written in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 5 × 106 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 5 × 107 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 5 × 109 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 5 × 1010 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **149.** | How is the number 42,600,000 written in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 4.26 × 105 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 4.26 × 106 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 4.26 × 107 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 4.26 × 108 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **150.** | What is the standard form of 3.01 × 104? |
|  |
|  | |  |  | | --- | --- | | **A.** | 0.0000301 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 0.000301 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 30,100 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 3,010,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **151.** | How is 57,900,000 written in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 5.79 × 108 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 5.79 × 107 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 5.79 × 106 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 5.79 × 105 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **152.** | What is 6.7 × 0.00065 expressed in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 4.355 × 10–3 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 4.355 × 10–2 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 4.355 × 103 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 4.355 × 106 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **153.** | How is 0.000068 written in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 6.8 × 10–4 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 6.8 × 10–5 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 6.8 × 10–6 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 6.8 × 10–7 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **154.** | How is the number 0.0058 written in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 58 × 104 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 5.8 × 103 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 58 × 10–4 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 5.8 × 10–3 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **155.** | In 2005, about 3.1 billion books were sold in the United States. How is the number of books sold written in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 3.1 × 106 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 3.1 × 107 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 3.1 × 108 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 3.1 × 109 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **156.** | A speck of dust has a diameter of 675 ten-millionths centimeters. How is this diameter expressed in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 6.75 × 10–4 centimeters | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 6.75 × 10–5 centimeters | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 6.75 × 10–6 centimeters | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 6.75 × 10–7 centimeters | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **157.** | The average distance from Pluto to the sun is about 3.7 × 109 miles. What is this distance written in standard form? |
|  |
|  | |  |  | | --- | --- | | **A.** | 37,000,000 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 370,000,000 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 3,700,000,000 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 37,000,000,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **158.** | What is 0.036 expressed in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 3.6 × 10–2 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 3.6 × 10–1 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 3.6 × 101 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 3.6 × 102 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **159.** | What is the standard form of 4.63 × 104 ? |
|  |
|  | |  |  | | --- | --- | | **A.** | 4,630 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 46,300 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 463,000 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 4,630,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **160.** | The average distance from Jupiter to the Sun is about 7.784 × 108 km. How should this distance be written in standard form? |
|  |
|  | |  |  | | --- | --- | | **A.** | 778,400,000,000 km | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 7,784,000,000 km | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 778,400,000 km | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 77,840,000 km | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **161.** | In 2008, a computer software company had approximately 1.4 × 106 dollars in revenue.  In 2010, the company’s revenue was approximately 1.2 × 108 dollars. ***About*** how many times more revenue did the company make in 2010 than in 2008? |
|  |
|  | |  |  | | --- | --- | | **A.** | 8.6 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 86 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 860 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 8,600 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **162.** | How is the product of 0.1 × 0.0001 written in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 1 × 10–5 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 1 × 10–3 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 1 × 103 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 1 × 105 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **163.** | The average depth of an ocean is approximately 1.2 × 104 feet. How is this depth written in standard form? |
|  |
|  | |  |  | | --- | --- | | **A.** | 120,000 feet | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 12,000 feet | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 1,200 feet | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 120 feet | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **164.** | The elevation of Mount Everest is about 2.9 × 104 feet. The elevation of Raleigh, North Carolina is about 315 feet. Which statement is true about the two elevations? |
|  |
|  | |  |  | | --- | --- | | **A.** | The elevation of Mount Everest is about 9 times greater than the elevation of Raleigh, North Carolina. | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | The elevation of Mount Everest is about 11 times greater than the elevation of Raleigh, North Carolina. | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | The elevation of Mount Everest is about 90 times greater than the elevation of Raleigh, North Carolina. | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | The elevation of Mount Everest is about 110 times greater than the elevation of Raleigh, North Carolina. | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **165.** | The population of City *M* is approximately 6.2 × 105. The population of City *N* is approximately 3.0 × 106. ***About*** how many times as large is the population of City *N* than City *M*? |
|  |
|  | |  |  | | --- | --- | | **A.** | 2 times as large | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 5 times as large | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 20 times as large | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 25 times as large | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **166.** | The area of the United States is approximately 3,797,000 square miles. How is this area written in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | 3.797 × 103 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 3.797 × 104 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 3.797 × 106 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 3.797 × 107 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **167.** | In 1790, the first United States census estimated the population to be approximately 3.9 × 106. In 2010, the United States census estimated the population to be approximately 3.09 × 108. ***About*** how many times as large is the population in 2010 than in 1790? |
|  |
|  | |  |  | | --- | --- | | **A.** | 8 times as large | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 12 times as large | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 80 times as large | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 120 times as large | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **168.** | In 2010, 1.2 × 109 people in the world spoke Chinese. In the same year, 3.6 × 108 people spoke English. ***About*** how many times as many people spoke Chinese as those who spoke English? |
|  |
|  | |  |  | | --- | --- | | **A.** | 2 times as many | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 3 times as many | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 4 times as many | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 5 times as many | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **169.** | A house cat weighs 7.5 pounds, and a large dog weighs 1.5 × 102 pounds. How many times heavier is the dog than the cat? |
|  |
|  | |  |  | | --- | --- | | **A.** | 5 times heavier | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 20 times heavier | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 50 times heavier | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 100 times heavier | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **170.** | The distance from Earth to Mars is about 1.4 × 108 miles.The distance from Earth to Jupiter is about 5.9 × 108 miles. ***About*** how many times as far away from Earth is Jupiter than Mars? |
|  |
|  | |  |  | | --- | --- | | **A.** | 2 times | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 4 times | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 20 times | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 40 times | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **171.** | How many times as large is 2.7 × 10–1 than 3 × 10–6? |
|  |
|  | |  |  | | --- | --- | | **A.** | 90 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 900 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 9,000 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 90,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **172.** | The weight of a tractor trailer is 9.1 × 104 pounds. The weight of a car is 1,800 pounds. ***About*** how many times heavier is the tractor trailer than the car? |
|  |
|  | |  |  | | --- | --- | | **A.** | 40 times | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 50 times | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 60 times | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 70 times | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **173.** | The speed of the fastest manned jet aircraft was 3.53 × 106 meters per hour. How is this number written in standard form? |
|  |
|  | |  |  | | --- | --- | | **A.** | 353,000 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 3,530,000 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 35,300,000 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 353,000,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **174.** | A large university has about 6.3 × 104 students. A small college has about 2.3 × 103 students. ***About*** how many times larger is the university than the college? |
|  |
|  | |  |  | | --- | --- | | **A.** | 3 times larger | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 4 times larger | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 27 times larger | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 40 times larger | |
|  |  |
|  |  |

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| --- | --- |
| **175.** | In 2014, the United States had a population of about 3.2 × 108. The population of Switzerland in 2014 was about 8.1 million. ***About*** how many times larger was the population of the United States than Switzerland in 2014? |
|  |
|  | |  |  | | --- | --- | | **A.** | 0.4 times larger | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 4 times larger | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 40 times larger | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 400 times larger | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **176.** | A tree is 9.0 × 102 inches tall. A building is 1.5 × 104 inches tall. ***Approximately*** how many times taller is the building than the tree? |
|  |
|  | |  |  | | --- | --- | | **A.** | 1.7 times taller | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 7 times taller | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 17 times taller | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 170 times taller | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **177.** | How many times larger is 4.2 × 103 than 3 × 10–1? |
|  |
|  | |  |  | | --- | --- | | **A.** | 140 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 1,400 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 14,000 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 140,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **178.** | Kelly is comparing the tuition costs for two different colleges. A community college has a tuition cost of 5 × 103 dollars per year. A four-year college has a tuition cost of 2.5 × 104 dollars per year. How many times more is the tuition at the four-year college compared to the community college? |
|  |
|  | |  |  | | --- | --- | | **A.** | 2 times more | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 5 times more | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 10 times more | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 20 times more | |
|  |  |
|  |  |

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| --- | --- |
| **179.** | The Burj Khalifa Tower in Dubai is the tallest building in the world, standing 3.26 × 104 inches tall. Anna’s house is 1.8 × 102 inches tall. ***About*** how many times smaller is Anna’s house than the Burj Khalifa Tower? |
|  |
|  | |  |  | | --- | --- | | **A.** | 1.8 × 102 times smaller | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 5.1 × 102 times smaller | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 1.8 × 106 times smaller | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 5.1 ×106 times smaller | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **180.** | An African bull elephant has a mass of about 5.5 × 106 grams. A flea has a mass of about 1.0 × 10–1 grams. Which statement is true? |
|  |
|  | |  |  | | --- | --- | | **A.** | The mass of the elephant is about 55,000 times greater than the mass of the flea. | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | The mass of the elephant is about 550,000 times greater than the mass of the flea. | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | The mass of the elephant is about 5,500,000 times greater than the mass of the flea. | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | The mass of the elephant is about 55,000,000 times greater than the mass of the flea. | |
|  |  |
|  |  |

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| --- | --- |
| **181.** | A female deer weighs about 57 kilograms. A female elephant weighs about 6 × 103 kilograms. ***About*** how many times heavier is the female elephant than the female deer? |
|  |
|  | |  |  | | --- | --- | | **A.** | 10 times heavier | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 11 times heavier | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 105 times heavier | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 110 times heavier | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **182.** | The population of Virginia is about 8.3 × 106. The population of Australia is about 2.4 × 107. ***Approximately*** how many times larger is the population of Australia than Virginia? |
|  |
|  | |  |  | | --- | --- | | **A.** | 3 times larger | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 5 times larger | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 29 times larger | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 35 times larger | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **183.** | How many times larger is 8 × 10–2 than 2 × 10–5? |
|  |
|  | |  |  | | --- | --- | | **A.** | 40 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 400 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 4,000 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 40,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **184.** | Sarah purchased a manufacturing machine worth $30,000 for her factory. The value of the machine decreases every year by $1,250. Which explicit equation represents the value, *v*, of the machine *t* years after the purchase? |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/f9459c41-9516-4d03-907f-491933ce9476/images/142b9e29e83ed56aa505cee4e2c6d00c.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/c02823f1-3e34-4bd3-835d-35aaa9318905/images/82a7925632dc38a3b193bbc1de66b286.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/e817af3f-3efc-4413-966c-b97cd3870803/images/89dda47b26050e740e03825f34e949ff.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/7f3ab34e-97d7-4365-a25e-9c473f7873fa/images/a889cb71d98d46a66bab2c959d29efd0.png | |
|  |  |
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| --- | --- |
| **185.** | Jessie deposited $6,000 in a savings account. The amount in the account after 1, 2, and 3 years is shown below.    $6,240, $6,480, $6,720, ...    Which expression represents the total amount in her account at the end of *t* years? |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/c9f4503e-2402-41aa-a94c-ec14152e500b/images/e3e52194c0d677f63e127fa5273e2e80.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/cc685e3d-b457-4cb3-98ea-7728b343135d/images/5bc53fccd9ab26e9583f0114c102d41e.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/37477dad-9904-4cc4-a318-6501211eb612/images/12222a5c185ae12f4402858eaab1e348.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/afd8a554-c8ed-4254-b022-3dc7ebe01eb3/images/f14742f24968115156980ebf25a07a36.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **186.** | A company has /files/assess_files/6fa5ab54-6255-4f5c-9eb4-ae23ebf7e19e/image/c4ad397e-66a6-43d9-b925-160e8f7b26ec.gif square feet of office space. Another company has /files/assess_files/6fa5ab54-6255-4f5c-9eb4-ae23ebf7e19e/image/fc8d1130-4ee2-444d-af75-c4bce4a2af94.gif square feet of office space. About how many times greater is the larger company’s space than the smaller company’s space? |
|  |
|  | |  |  | | --- | --- | | **A.** | 2 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 6 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 16 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 30 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **187.** | The speed of sound at a certain temperature is approximately /files/assess_files/7813542e-e2db-4cc8-bb8f-89ee2753a487/image/48981074-6a39-42eb-b456-32dcb44c64e5.gif feet per second. A snail moves at approximately /files/assess_files/7813542e-e2db-4cc8-bb8f-89ee2753a487/image/21b09bd0-63d3-4990-a977-adb1306aa00f.giffeet per second. Which expression shows how many times faster the snail will have to travel to move at the speed of sound? |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/e3fb2c62-e1e4-4bb3-a453-3b36a5d7429b/image/09fe3fc5-068d-4547-a8b7-e908bfeeed1c.gif | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/f7cfaccb-e085-4769-b55c-48c40b16508a/image/d61c0ef3-ab8f-4c80-8333-2e5b126e43a5.gif | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/a2fa7f45-ea23-4907-ad7d-ce5a828f0e42/image/3a08e5f9-9ec2-4ff3-8cb8-4715913bad99.gif | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/861876a6-4593-4026-bbd0-eb1fd4c56451/image/853c823d-0b93-48f5-bbc4-5d6c35d5e252.gif | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **188.** | The mass of Earth’s moon is approximately /files/assess_files/750c34e7-093a-4538-8b5c-e3596d5f8d69/image/679a4d8a-af47-46d6-8fef-586b20bcb080.gif kilograms. The mass of Venus is approximately /files/assess_files/750c34e7-093a-4538-8b5c-e3596d5f8d69/image/98375842-9504-4c0a-a7dc-8e21363342e4.gif kilograms. The mass of Venus is about how many times greater than the mass of Earth’s moon? |
|  |
|  | |  |  | | --- | --- | | **A.** | 0.014 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 0.71 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 71 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 140 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **189.** | How many times greater is /files/assess_files/e73981b5-e972-4a14-be32-4f33aa47e6d6/image/82f603a6-dfa6-4039-9849-d5d7e0a323cf.gif than /files/assess_files/e73981b5-e972-4a14-be32-4f33aa47e6d6/image/657cbba8-f572-403a-b1f3-d21b2b2970e0.gif ? |
|  |
|  | |  |  | | --- | --- | | **A.** | 100,000,000 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 200,000,000 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 1,000,000,000,000,000 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 2,000,000,000,000,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **190.** | A microgram is equal to /files/assess_files/528d9ac3-9177-4c9e-a487-9ee631ffaacc/image/8c012d51-2f52-4b9b-8581-ce0cf7ba24d5.gif grams. How many times greater than a microgram is /files/assess_files/528d9ac3-9177-4c9e-a487-9ee631ffaacc/image/e12d7017-0f74-4178-ae9f-56bdc22cb201.gifgrams? |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/5c01224e-1d68-4db9-825b-631395f47cd5/image/679b9f84-19a0-49c4-953a-8b21b0f66d92.gif | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/74febc08-c610-44c3-af72-0b16060324de/image/1644cd4e-449e-4bb9-8360-e474cdcc49cb.gif | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/b65a53ee-393a-411c-bf1e-031eafec415d/image/16b308d4-655e-435b-b02a-03a9992726d6.gif | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/413c3b4b-8137-4790-b7a4-68467f89ec57/image/9890b3ca-88fc-4fc1-91ff-902210a59796.gif | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **191.** | What is the value of 0.002 written in scientific notation? |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/35c626dd-9038-43c8-a29a-7e16d555c979/image/845915a8-7423-46c5-9865-426faf3bc347.gif | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/9b56fed5-46cb-40be-baf3-f7aa2c8b8c67/image/8b94800f-ae16-46f6-a449-36762e63abfb.gif | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/83f6dc9d-e61e-4cf5-99b9-90c8e8485164/image/bcf699e0-384f-460d-a123-e410da5df93c.gif | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/dc83ca05-8a83-43a4-aabb-048c9f65ab4c/image/b62d7bb3-7271-4a7d-a7c9-cfb6923099e9.gif | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **192.** | Accordingto the 2010 national census, the total population of the United States was approximately /files/assess_files/5fcb64e6-b3b5-4edf-b404-ca2e480d3654/image/e56c120f-a463-44b1-bcac-813f343e4a65.gif people. The total population of a town was approximately /files/assess_files/5fcb64e6-b3b5-4edf-b404-ca2e480d3654/image/1c7de025-b55a-4d6c-85ee-a30bfc36a84f.gif people. The population of the United States was how many times greater than the population of the town? |
|  |
|  | |  |  | | --- | --- | | **A.** | 3 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 300 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 3,000 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 30,000 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **193.** | The mass of two objects is being compared during a physics experiment. It is determined that object A has a mass of /files/assess_files/c9982064-2cbd-473e-a50c-5ebc789fa59e/images/ca634eb1cb686f90834ccc5df5d1b5dd.png and object B has a mass of /files/assess_files/c9982064-2cbd-473e-a50c-5ebc789fa59e/images/415e4904f1f66c8c4732026ed42537a0.png How many times larger is the mass of object A than the mass of object B? |
|  |
|  | |  |  | | --- | --- | | **A.** | 0.1 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 0.4 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 10 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 40 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **194.** | The average distance of Mercury from the Sun is about /files/assess_files/76de1c1c-0355-4efa-aafe-03cdc1b5ab5e/images/d81300aa26dda91007498b76b52296e3.png kilometers (km). The average distance of Jupiter from the Sun is about 13 times the distance of Mercury from the Sun. What is the approximate average distance of Jupiter from the Sun, in km? |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/3492daac-a9c2-4c62-bf26-1b667cc39f37/images/d6bb472bfa3bc2af2d34605acc745ed3.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/7c04561f-6595-4988-a451-bb87dc070788/images/4468ec7ec38919dfd3ac2bbb8add65fc.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/3d043d49-6328-490f-8b24-1db517b6badd/images/543aa29574e1c3bdfe3756346713df23.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/1fb4c452-386c-43e9-ae9e-c6925eaf484d/images/baeca69db35e7949b2658d0ac9dc3b3b.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **195.** | The area of the Pacific Ocean is about /files/assess_files/8bcf614f-0fd1-443a-907b-6f6da95a0f9e/images/04e9bc35af27b9382110c3365a76b506.png square miles. The area of the Southern Ocean is about /files/assess_files/8bcf614f-0fd1-443a-907b-6f6da95a0f9e/images/8d2efc1bef513f60ffcb1b9b76e6c77e.png square miles. Approximately how many times larger is the area of the Pacific Ocean than that of the Southern Ocean? |
|  |
|  | |  |  | | --- | --- | | **A.** | 8 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 9 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 13 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 20 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **196.** | The populations of two towns, town A and town B, are being compared. The population of town A is /files/assess_files/ad491437-a933-4d76-ab0a-13936b123fab/images/3d2e654d7f268ed4f2ddbb76efc7ce53.png and the population of B is /files/assess_files/ad491437-a933-4d76-ab0a-13936b123fab/images/95d7b4b90b05d42bea827890b152be28.png How many times greater is the population of town B than town A? |
|  |
|  | |  |  | | --- | --- | | **A.** | 0.2 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 0.5 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 2 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 5 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **197.** | The speed of light is approximately /files/assess_files/c608c3b6-e57f-49e2-bdb8-73bd019d0ed7/images/d575d1e4241d35e24f2ad99679ddc5ca.png meters per second. While solving a problem, Cara used /files/assess_files/c608c3b6-e57f-49e2-bdb8-73bd019d0ed7/images/14beaa2d871ea5c81afa3080196d3475.png meters per second for the speed of light and got the incorrect answer. By which factor should Cara multiply her answer in order to get the correct answer? |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/15216ffc-8a4e-4f43-963e-710dba002bd6/images/1913273d00a3d90f748847785c0456df.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/f7a16d3a-3f2d-4e2e-b0e8-dfb6b63339bc/images/e53d01c8b1ac7390280cd88da87197ea.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/22646cdc-f5a1-4226-b953-39c4a564548a/images/baf736189ff1fe860500358772a5c3cd.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/42bfcd69-251c-45c2-9b81-537daf0b1581/images/ea9b89f312eeb0f506b729762ef7b08e.png | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **198.** | The mass of the Earth is /files/assess_files/6cd1826f-34d5-4207-9edb-45cb8e58d532/images/008e2ac68fe2c8c2f9498cdf4de43062.png times the mass of the Sun. If the mass of the Sun is /files/assess_files/6cd1826f-34d5-4207-9edb-45cb8e58d532/images/049d96ac7c2a8d0f706bb154fa5296d0.png kilograms, what is the mass of the Earth, in kilograms? |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/918ae7aa-9180-4441-9131-57da7bd2d334/images/61ad7add3ad7c96974f970cdab993259.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/0613ff98-d9bf-46c2-a0c3-5e3ced7963b1/images/3cef9aa1cec0c1ba94164a6876ff2cb0.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/54bf3826-32e8-4b59-86d4-284364b5c014/images/ace0c0806a91c58acdd072a83351ae5c.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/7de301a3-09d5-4a11-aab0-3735a5f8bade/images/7148e5e1b0c20bec098188690016b64f.png | |
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| **199.** | John purchased a TV on sale for $1,500 using his store credit card. The annual interest rate is 12% and is compounded monthly. The monthly payments are $375. Which recursive equation expresses the remaining amount to be paid off as a function of the number of months, *n*, where /files/assess_files/48fbbcba-5e46-4938-8609-7a7d0cd3a8b5/images/78961008c733584f8ad6c7dff9976b82.png is the balance from the previous month? |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/dfc01758-6272-4c6c-8e7a-b384b113c526/images/da418776bfc1f3ff37cec415e6702806.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/bfea9bee-ae94-4f4b-a2d4-5f20649b37e5/images/bf4e41adb99512c5f7bce044e5a9398f.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/d95d63ba-ae02-402a-bf70-29418b20e4a9/images/da622f0b547e989ed2b5d924f4e67f9d.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/711d73a5-4da8-4e2b-91f8-a19c2c85bcff/images/c9a7daf86a0af457cfe3af9b4ad87856.png | |
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| **200.** | An athlete is training to run a marathon. She plans to run 2 miles the first week. She increases the distance by 8% each week. Which function models how far she will run in the *n*th week? |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/0444ae86-a0fe-4f84-a03e-80862b065654/images/7f95f21c6552b5d59d47eb37b6b73a94.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/cb683086-2e10-4172-89f1-280a7687e281/images/83167bfafcc92a41d7d375bcb1f3a344.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/5572f70f-6d60-4816-b8f8-c71037244473/images/a7a84812161daf5729ff82b6fa39980b.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/9afd8fc0-237d-4e93-81b2-29518f152d3f/images/2dcc18ad145e1e9aeec082a58dfbf571.png | |
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| **201.** | James threw a ball from the roof of a building. The ball fell 3 feet in the first second, 9 feet in next second, and 27 feet in the third second. Which expression represents the distance the ball fell at the *n*th second? |
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|  | |  |  | | --- | --- | | **A.** | /files/assess_files/d6f413e8-fc32-4eec-ab2a-c490b621c6e4/images/5547d340b4d2fd5aace47535d03bc155.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/d67fe910-fe3c-48e5-abc6-2a85359dbc53/images/dc1b346ebf9195750d61c7e60c8e76b0.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/7d3bb5aa-8818-4063-a703-4856dbe94ce6/images/664f287659fb47a05f153d7f1ed3e633.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/68951b1a-90f8-4d55-9f62-96ec974c7613/images/f2a5c5f46298c2b9b5fb5f440792b3b9.png | |
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