|  |  |
| --- | --- |
| **1.** | Given the equation *x* + 2*y* = 0,  which equation will form a system of linear equations without a solution? |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/caa18c9b-3a3d-47d2-bc04-7aa4340da14e/image/8b5f1f04-854e-4bf0-9304-e69971f31429.gif | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/59b0d12a-dcd1-48d9-b34d-55f93dec65c7/image/192474d1-28fd-4cc9-b8cd-abb2e05e69a6.gif | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/b653ff74-58c8-4e05-bf53-96b7f10d2859/image/fe1e8c5f-62bf-432e-88e5-9a701a41bea3.gif | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/e318b886-d1b0-416a-ad86-bf290153652d/image/ea5410f7-db79-41ce-bd0d-91a532726a34.gif | |
|  |  |
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| --- | --- |
| **2.** | A student wants to determine the solution to the system of linear equations shown.    − 2x + y = 3    x + 3y =12    Which first step would allow the student to eliminate the x-terms? |
|  |
|  | |  |  | | --- | --- | | **A.** | Multiply *x* + 3*y* = 12  by 2. | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | Multiply − 2*x* + *y* = 3  by 3. | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | Multiply *x* + 3*y* = 12  by − 2. | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | Multiply − 2*x* + *y* = 3  by − 3. | |
|  |  |
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| --- | --- |
| **3.** | The perimeter of a rectangle is 48 inches. The rectangle is twice as long as it is wide. What is the length of the rectangle? |
|  |
|  | |  |  | | --- | --- | | **A.** | 8 inches | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 16 inches | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 24 inches | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 32 inches | |
|  |  |
|  |  |

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| --- | --- |
| **4.** | Tickets to a school basketball game cost $4 for students and $7 for adults. At the end of the night, 168 tickets are sold for a total of $861. How many student tickets are sold? |
|  |
|  | |  |  | | --- | --- | | **A.** | 29 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 42 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 63 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 105 | |
|  |  |
|  |  |

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| --- | --- |
| **5.** | The equation *d* = − 6*t* + 10 represents the distance *d*, in miles, Ralph walks from the library to his house in *t* hours. His sister, Joan, leaves the library after Ralph. She rides her bicycle from the library to their house at a constant rate. The equation *d* =  14*t* represents Joan’s bicycle ride where *d* is the distance, in miles, and *t* is the time, in hours.  After how many miles will Joan meet Ralph walking to their house? |
|  |
|  | |  |  | | --- | --- | | **A.** | 2.5 miles | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 7 miles | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 18 miles | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 28 miles | |
|  |  |
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| --- | --- |
| **6.** | Given the equations *x* + *y* = 20  and *x* − *y* = 8, which values of *x* and *y* satisfy both equations? |
|  |
|  | |  |  | | --- | --- | | **A.** | *x* = 11  and *y* = 9 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | *x* = 9  and *y* = 11 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | *x* = 14  and *y* = 6 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | *x* = 6  and *y* = 14 | |
|  |  |
|  |  |

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| --- | --- |
| **7.** | A theater charges $5 for student tickets and $7 for adult tickets. They sold 75 tickets for a total of $425. Which set of equations can be used to determine *x*, the number of student tickets sold, and *y*, the number of adult tickets sold? |
|  |
|  | |  |  | | --- | --- | | **A.** | x – *y* = 75    5x + 7*y* = 425 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | x – *y* = 425    5x + 7*y* = 75 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | x + *y* = 75    5x + 7*y* = 425 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | x + *y* = 425    5x + 7*y* = 75 | |
|  |  |
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| --- | --- |
| **8.** | Line *M* goes through the points /files/assess_files/fd128e52-97a5-4471-bc03-7b49e8f29f4f/images/3da21972ce984562b4f2c1664ff163a2.png and /files/assess_files/fd128e52-97a5-4471-bc03-7b49e8f29f4f/images/ff3400c124a82945eead974a850818d7.png Which pair of points lies on a straight line that intersects Line *M*? |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/1a6f39ab-79dc-45b0-b087-210edfd420d6/images/e9d2b414275ec8ae19b7758be188369e.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/6bf868bd-6c23-4609-96b0-a45eb7bd7765/images/788368f94222eaf9f77c2bcd90c1b0a5.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/c8efef68-adcf-4153-99d9-09a11a970ad2/images/9cf5024dc27c98321c07494daef83fd0.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/f84ffb51-e559-489e-a8e8-7f90a7f6f066/images/66d520b54223c62c634bc469f201ad56.png | |
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| --- | --- |
| **9.** | A medium pizza at Benny’s Pizza costs $13.60 plus $2.50 for each topping. At Ricco’s Pizza, a medium pizza costs $14.60 plus $2 for each topping. Which statement is **true** regarding the price of a medium pizza at the two pizza restaurants? |
|  |
|  | |  |  | | --- | --- | | **A.** | A pizza with one topping will cost more at Benny's Pizza. | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | A pizza with two toppings will cost more at Ricco's Pizza. | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | A pizza with three toppings will cost less at Benny's Pizza. | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | A pizza with four toppings will cost less at Ricco's Pizza. | |
|  |  |
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| --- | --- |
| **10.** | Which ordered pair is the solution to the system of linear equations graphed below?    /files/assess_files/0f09fa17-31d8-449d-a085-c57b2405d8d1/images/45f17ad0-024e-458a-89cc-af345002a870_a370171.gif |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/fa9e8d49-70f3-43ef-9a59-368975251313/images/39aa719d697ea36ab4faa8c3a31c81eb.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/07510493-185a-43b0-a762-172d88548a96/images/bde80f0cc63f34c2c5fc8ec906f3f443.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/c00f5ddd-1a43-41d0-aad3-4dc961b77335/images/c008ce70a315c5590593fd7c40bb90f5.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/fe2daa06-b583-4396-af2f-f85da748d199/images/b7359a0605a91e072954db20509019f2.png | |
|  |  |
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| --- | --- |
| **11.** | Paul has a collection of nickels and dimes that has a total value of $12.50. He has 150 coins in all. How many dimes does Paul have? |
|  |
|  | |  |  | | --- | --- | | **A.** | 50 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 75 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 100 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 134 | |
|  |  |
|  |  |

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| --- | --- |
| **12.** | The tickets to a high school hockey game cost either $6 or $11. A total of 450 tickets, worth $3,950, were sold. How much of the $3,950 was made from selling the $6 tickets? |
|  |
|  | |  |  | | --- | --- | | **A.** | $2,750 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | $1,200 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | $250 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | $200 | |
|  |  |
|  |  |

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| --- | --- |
| **13.** | On weekdays, a movie theater charges different rates for adults and children. If 3 adults and 2 children go for a movie on a weekday, the total cost of the tickets is $31. If 2 adults and 3 children go on a weekday, the total cost of the tickets is $29. If a group of adults and 6 children go to the movie theater on a weekday and pay $58 for tickets, how many adults are in this group? |
|  |
|  | |  |  | | --- | --- | | **A.** | 4 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 5 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 7 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 8 | |
|  |  |
|  |  |

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| --- | --- |
| **14.** | What is the *x-*value of the solution to the system of equations shown below?    /files/assess_files/9929ecdb-5dfc-498e-b598-113821e716f6/images/d310ce316724757fa07488dfd3b8c81c.png |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/46657fd6-1847-411e-a1c8-89bb6d6f8781/images/f3a4422b9b99a0f4dd861b09919daaef_1.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/a2c6145c-abd3-43cd-bcd7-9a54f0fca26c/images/8b5e96d70ba40af7bd3e3cbf2e29c58d_123.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/d679db0a-c402-498c-9452-04e946dbf4fa/images/9d6ef89b54866f968c7cd22973fd98b3.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/7fcf8106-ffab-45be-b5fa-576b1bc5faa7/images/d5050002dd2ddcad9e9d09ee09c279b5.png | |
|  |  |
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| --- | --- |
| **15.** | What is the solution to the system of equations shown below?    /files/assess_files/859d2154-770d-4ab6-8732-6ee65ebb2aef/images/b118d60fa5c109c4f082afb4bfaf0467.png |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/0977a5f8-d30e-4a11-8eb3-3db98bc7dd49/images/1eca1e1a7ff2ca89cfc3a8f2fdc7df48.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/61b85f7d-aaad-4bd0-91ae-bd55e4e4ce15/images/1a25cc5c5730c712999b046fa0e866e9.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/d9ce0810-130e-4c64-b668-556e3158e749/images/596571c4e293d35822a0b57c5c381351.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/04a74afa-eded-4cb6-bd73-df8c0776a1aa/images/7cf29dcd2ac3ac5394908cf2e9e5143b.png | |
|  |  |
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| --- | --- |
| **16.** | Ethan and Emily went shopping at a local farmers’ market. They both bought the same type of apples and potatoes at the same stand. Ethan paid $25.50 for 8 pounds of apples and 5 pounds of potatoes. Emily paid $18.50 to buy 3 pounds of apples and 10 pounds of potatoes. Which ordered pair represents the price per pound of apples, *x*, and potatoes, *y*? |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/8db870a2-eddf-4dd8-a296-c61800b96bd3/images/a7b82d0a3445ed93b83f72155b3f143c.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/1cb32a59-42f3-4025-a551-191e889532de/images/025d2e4411319753ea84dfd62178a39f.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/5d88b476-826f-4594-9169-38c181d9f81c/images/e84a45f718b555aaaac3992dccd49490.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/63006649-ffdf-4abd-a03e-ee586812764e/images/23c806f2e091f84853dba9224c120522.png | |
|  |  |
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| --- | --- |
| **17.** | How many solutions does the system of equations shown below have?    /files/assess_files/2c275e6f-2fd1-4c9a-b452-c47d4786130b/images/b1ef56158b0dc89f7bad79f159409b55.png |
|  |
|  | |  |  | | --- | --- | | **A.** | no solution | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | infinitely many solutions | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | one solution with a*y* value of /files/assess_files/923e9636-a68c-42bd-974e-5f0045bd0793/images/3b3813c4de79406fb535cbea674a8728_1.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | one solution with a *y* value of /files/assess_files/1427e0b4-1e40-4ba1-90f9-03467ef84ce7/images/8b5e96d70ba40af7bd3e3cbf2e29c58d_12.png | |
|  |  |
|  |  |

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| --- | --- |
| **18.** | What is the *y* value of the solution to the system of equations shown below?    /files/assess_files/ee296c1b-8ea0-4417-90be-864c08e8d683/images/128aa8c8600473dd919efe2ae0804167.png |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/085b14ba-e2ed-4f30-b203-f067a6e0545f/images/62d697dc4826f6b072a6121302e1333a.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/c0159b74-3832-49db-b1d1-db947349a966/images/c7ad4e6a1925d223d8929e74494d2433.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/74c58c16-e385-4d4e-b785-147e8c32e2a7/images/8c88e2ff90c175649c45c26887349384.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/2c5bfda5-8896-44f1-94fc-80bac47465cb/images/b5170b4bb622c728d213fe044fd4d53c.png | |
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| --- | --- |
| **19.** | Jenny went to an office supply store and spent $21 (not including tax) on a total of 7 items (notepads and staplers). The cost of one notepad is $1, and the cost of one stapler is $8. How many notepads did Jenny buy? |
|  |
|  | |  |  | | --- | --- | | **A.** | 5 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 4 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 3 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 2 | |
|  |  |
|  |  |

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| --- | --- |
| **20.** | Two customers entered Kim’s bakery at the same time. One of them bought 7 bagels and 5 doughnuts, and paid $7.35. The other customer bought 4 bagels and 6 doughnuts, and paid $6.40. What is the price of each bagel and each doughnut? |
|  |
|  | |  |  | | --- | --- | | **A.** | A bagel costs $0.30, and a doughnut costs $1.05. | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | A bagel costs $0.55, and a doughnut costs $0.70. | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | A bagel costs $0.70, and a doughnut costs $0.55. | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | A bagel costs $1.05, and a doughnut costs $0.30. | |
|  |  |
|  |  |

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| --- | --- |
| **21.** | Lincoln High School’s basketball team won the regional playoffs scoring a total of 60 points, not including free throws. The team made a total of 26 baskets; some were 2-point shots, and the rest were 3-point shots. How many 2-point shots did the team make? |
|  |
|  | |  |  | | --- | --- | | **A.** | 8 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 12 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 13 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 18 | |
|  |  |
|  |  |

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| --- | --- |
| **22.** | On Sunday 440 people visited a museum that charges $9 for each child and $12.50 for each adult. If the museum earned $5,220 on that day, how many adults visited the museum on Sunday? |
|  |
|  | |  |  | | --- | --- | | **A.** | 20 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 80 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 360 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | 420 | |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **23.** | Raul is choosing from two plans at his gym. He can either pay a set price for each visit, or he can buy a membership, which would have a lower price per visit in addition to a membership fee. Which model could be used to determine which plan would be less expensive based on the number of visits he makes? |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/ec27696a-1b9b-4c81-8e4b-bd58d1354c3c/images/49af6082-b241-4f1d-a48c-9f98ed526eee_MAMAT080810272_Aa.gif | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/84ebc001-b91b-41f4-a8ea-f8453d2b260a/images/49af6082-b241-4f1d-a48c-9f98ed526eee_MAMAT080810272_Ba.gif | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/94279a7f-0a98-4b3d-8bb9-937ac22cdd96/images/49af6082-b241-4f1d-a48c-9f98ed526eee_MAMAT080810272_Ca.gif | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/e8f66c3b-b6c3-4349-ac27-66339c40b87d/images/49af6082-b241-4f1d-a48c-9f98ed526eee_MAMAT080810272_Da.gif | |
|  |  |
|  |  |