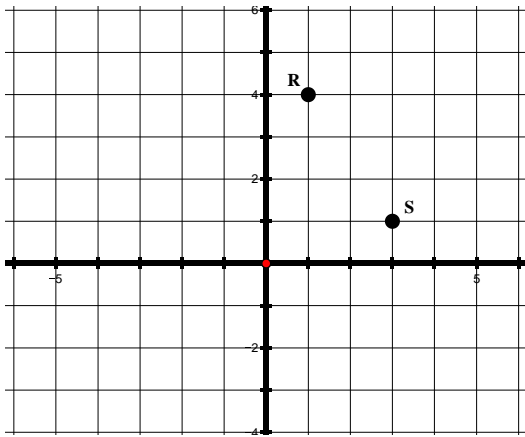


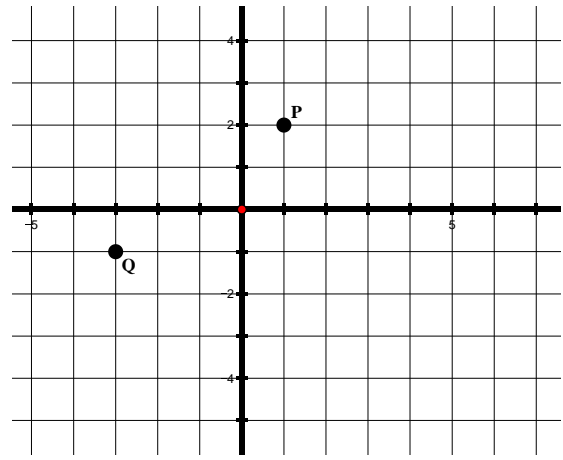
### 10.3b Homework: Finding Distance Between Two Points

**Directions:** Find the distance between the two points shown on each grid below. Leave your answers in simplest radical form.

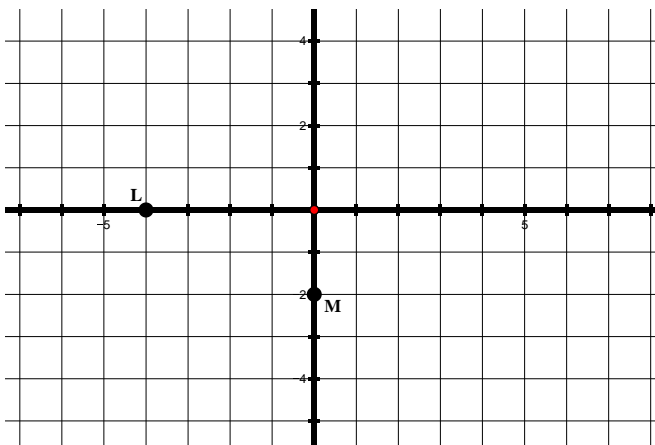
1.



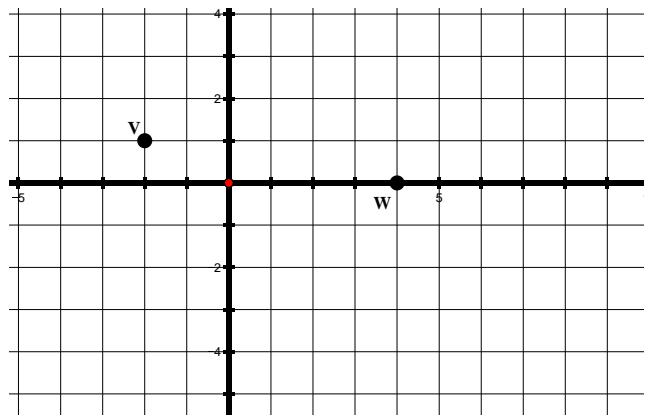
2.



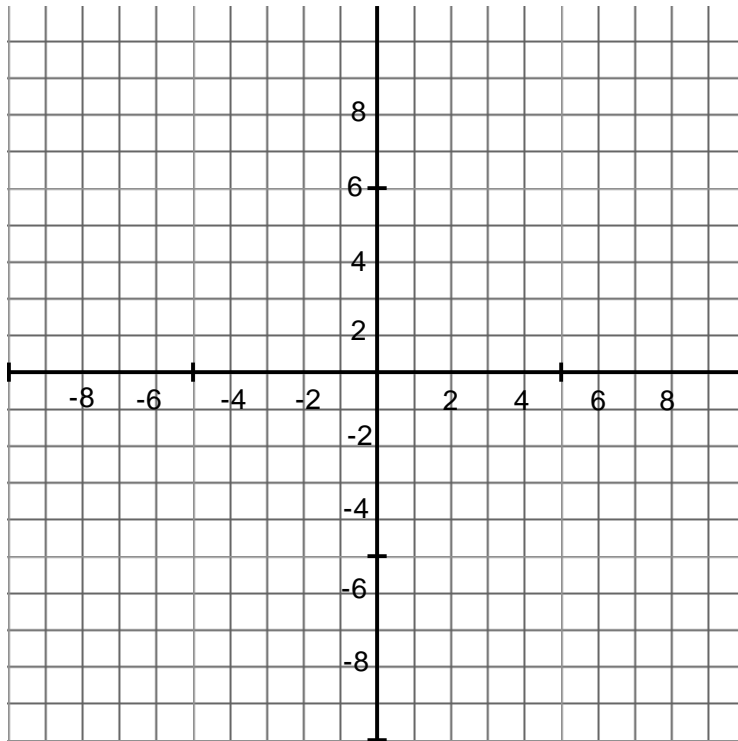
3.



4.



5. Find the distance between the two points given below. Leave your answers in simplest radical form.
- $A: (2, 1)$   $B: (4, 7)$
  - $R: (2, -1)$   $S: (8, -7)$
  - $C: (1, 0)$   $D: (2, -3)$
  - $S: (-2, -4)$   $T: (2, -5)$
6. Plot any letter of the alphabet that is made up of segments that are straight lines on the coordinate plane given below. For example you can plot the letter A, E, F, etc. but not the letter B,C, D, etc.



- Find the total distance for the segments that make up this letter.
- If you dilated this letter by a scale factor of 4 what is the total distance of the segments that make up your letter?
- If you dilated this letter by a scale factor of  $\frac{1}{5}$  what is the total distance of the segments that make up your letter?
- Rotate your letter 180 degrees about the origin. Does this transformation change the size or shape of the letter? Explain your answer.