

**CHAPTER 1 PRACTICE PROBLEMS**

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**Find the distance between each pair of points.**

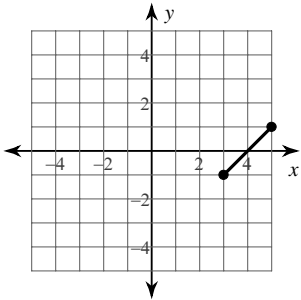
1)  $(-1, 8), (8, -1)$

2)  $(2, 3), (-3, -2)$

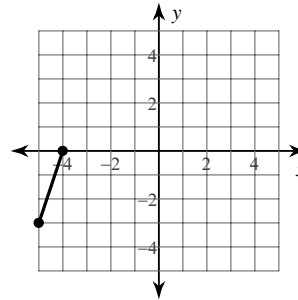
3)  $(6, 8), (-6, 6)$

4)  $(-8, -5), (-1, 6)$

5)



6)

**Find the midpoint of the line segment with the given endpoints.**

7)  $(8, 0), (3, -9)$

8)  $(-10, 10), (-4, 2)$

9)  $(-7, 6), (2, -9)$

10)  $(-3, 3), (-5, 1)$

**Find the other endpoint of the line segment with the given endpoint and midpoint.**

11) Endpoint:  $(0, -9)$ , midpoint:  $(1, -1)$

12) Endpoint:  $(3, 8)$ , midpoint:  $(-6, 9)$

13) Endpoint:  $(6, 5)$ , midpoint:  $(1, -2)$

14) Endpoint:  $(10, -7)$ , midpoint:  $(-6, -4)$

**Simplify.**

15)  $\sqrt{42}$

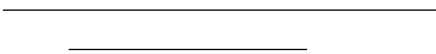
16)  $\sqrt{800}$

17)  $\sqrt{128}$

18)  $\sqrt{392}$

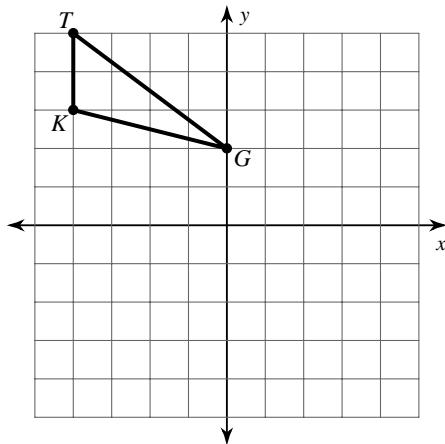
**Construct a line segment whose length is equal to the difference of the lengths of the given line segments.**

19)

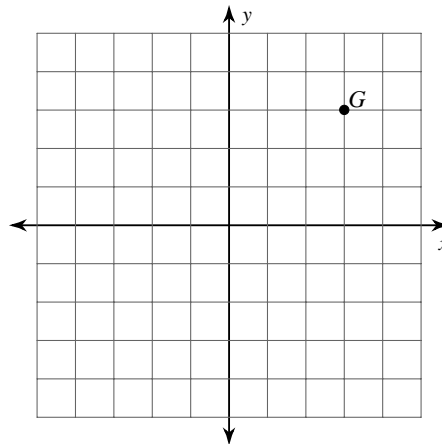


**Graph the image of the figure using the transformation given.**

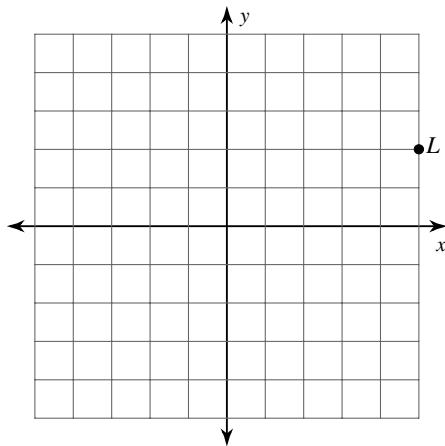
20) reflection across the y-axis



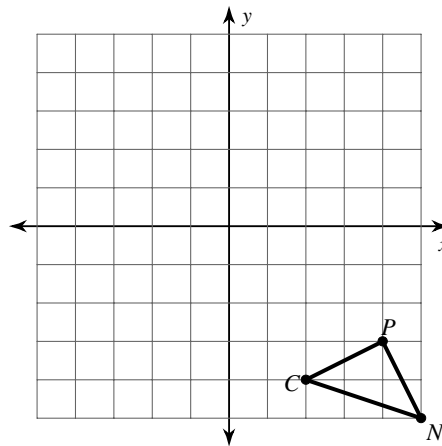
21) reflection across the y-axis



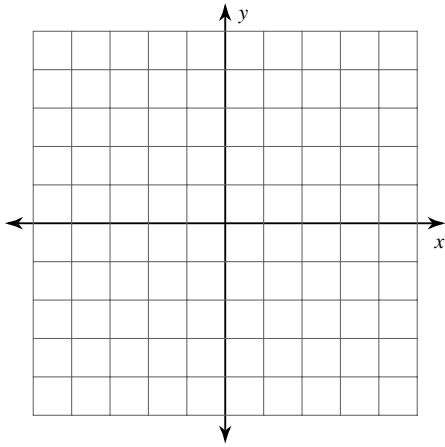
22) reflection across the x-axis



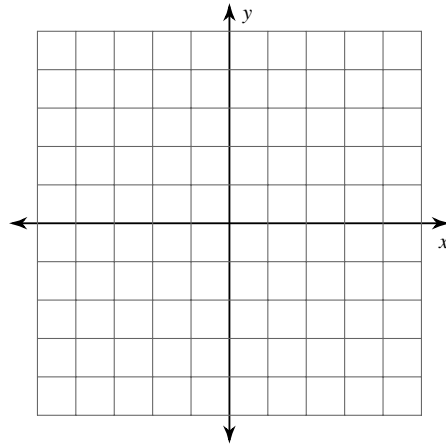
23) reflection across the x-axis



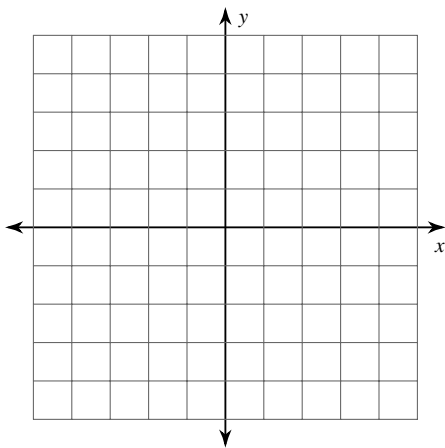
- 24) translation: 2 units right  
 $M(1, 2)$



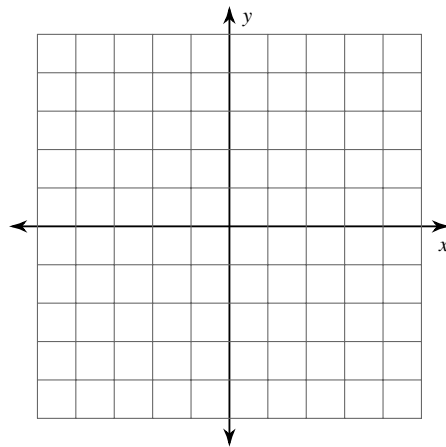
- 25) translation: 6 units right and 2 units down  
 $V(-4, 3), Z(-4, 5), W(-1, 4)$



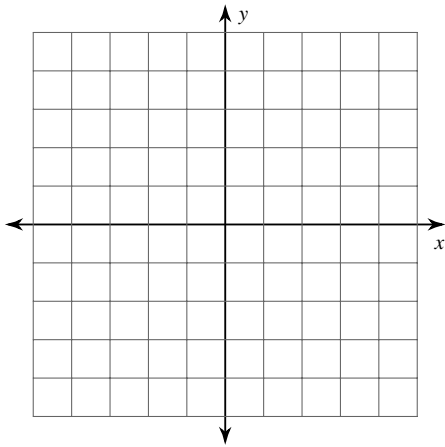
- 26) translation: 3 units left and 5 units down  
 $L(-2, 1)$



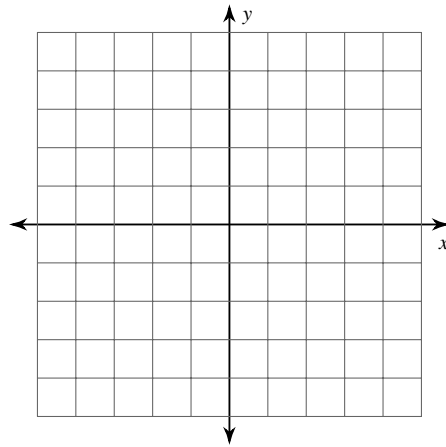
- 27) translation: 5 units left and 4 units up  
 $P(2, -4), Q(2, -1), K(5, -1)$



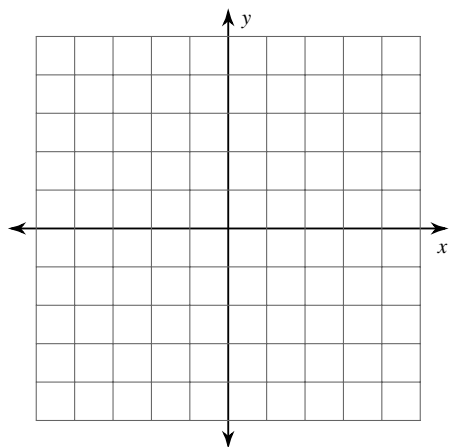
- 28) translation:  $(x, y) \rightarrow (x - 6, y + 3)$   
 $A(1, 2)$



- 29) translation:  $(x, y) \rightarrow (x + 4, y - 3)$   
 $R(-5, -2), S(-3, 3), C(0, -1)$

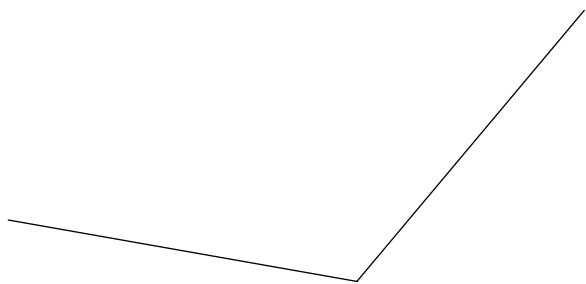


30) translation:  $(x, y) \rightarrow (x - 2, y)$   
 $Y(4, 5)$

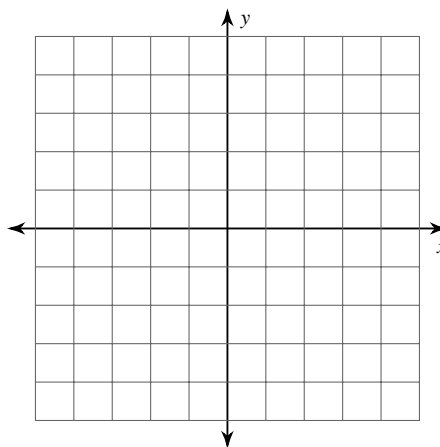


**Construct the bisector of each angle.**

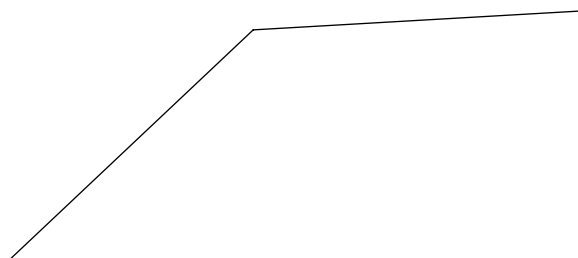
32)



31) translation:  $(x, y) \rightarrow (x + 2, y - 2)$   
 $I(-4, -2), M(-1, 0), G(-1, -3)$

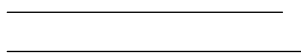


33)



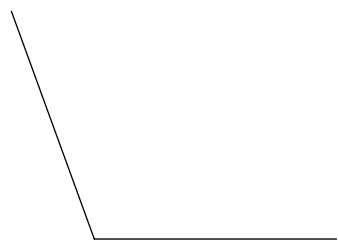
**Construct a line segment whose length is equal to the sum of the lengths of the given line segments.**

34)



**Construct a copy of each angle given.**

35)



36)

