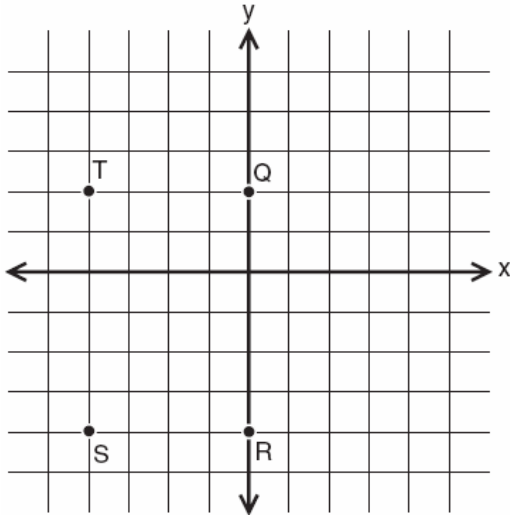


NAME: \_\_\_\_\_

1. 080211a, P.I. G.G.61

If  $x = -2$  and  $y = -1$ , which point on the accompanying set of axes represents the translation  $(x, y) \rightarrow (x + 2, y - 3)$ ?



- [A] T      [B] S      [C] R      [D] Q

2. 060402a, P.I. G.G.61

What is the image of  $(x, y)$  after a translation of 3 units right and 7 units down?

- [A]  $(x + 3, y + 7)$       [B]  $(x - 3, y + 7)$   
 [C]  $(x - 3, y - 7)$       [D]  $(x + 3, y - 7)$

3. fall0818ge, P.I. G.G.54

A polygon is transformed according to the rule:  $(x, y) \rightarrow (x + 2, y)$ . Every point of the polygon moves two units in which direction?

- [A] left      [B] down      [C] up      [D] right

4. 069903a, P.I. G.G.61

What is the image of point  $(2, 5)$  under the translation that shifts  $(x, y)$  to  $(x + 3, y - 2)$ ?

- [A]  $(0, 8)$       [B]  $(0, 3)$       [C]  $(5, 3)$       [D]  $(5, 8)$

5. 080409a, P.I. G.G.61

What are the coordinates of  $P'$ , the image of  $P(-4, 0)$  under the translation  $(x - 3, y + 6)$ ?

- [A]  $(-7, 6)$       [B]  $(2, -3)$   
 [C]  $(1, 6)$       [D]  $(7, -6)$

6. 010509a, P.I. G.G.61

The image of point  $(3, -5)$  under the translation that shifts  $(x, y)$  to  $(x - 1, y - 3)$  is

- [A]  $(-4, 8)$       [B]  $(2, -8)$   
 [C]  $(2, 8)$       [D]  $(-3, 15)$

7. 080609a, P.I. G.G.61

What is the image of point  $(-3, 4)$  under the translation that shifts  $(x, y)$  to  $(x - 3, y + 2)$ ?

- [A]  $(-6, 8)$       [B]  $(0, 6)$   
 [C]  $(-6, 6)$       [D]  $(6, 6)$

8. 060309a, P.I. G.G.54

A translation moves  $P(3, 5)$  to  $P'(6, 1)$ . What are the coordinates of the image of point  $(-3, -5)$  under the same translation?

- [A]  $(0, -9)$       [B]  $(-6, -9)$   
 [C]  $(-6, -1)$       [D]  $(-5, -3)$

9. 010614a, P.I. G.G.54

The image of point  $(-2, 3)$  under translation  $T$  is  $(3, -1)$ . What is the image of point  $(4, 2)$  under the same translation?

- [A]  $(-1, 6)$       [B]  $(0, 7)$   
 [C]  $(5, 4)$       [D]  $(9, -2)$

NAME: \_\_\_\_\_

10. 080508b, P.I. G.G.54

The image of the origin under a certain translation is the point  $(2,-6)$ . The image of point  $(-3,-2)$  under the same translation is the point

- [A]  $(-1,-8)$                       [B]  $(-6,12)$   
 [C]  $(-\frac{3}{2}, \frac{1}{3})$                       [D]  $(-5,4)$

11. fall0803ge, P.I. G.G.54

Triangle  $ABC$  has vertices  $A(1,3)$ ,  $B(0,1)$ , and  $C(4,0)$ . Under a translation,  $A'$ , the image point of  $A$ , is located at  $(4,4)$ . Under this same translation, point  $C'$  is located at

- [A]  $(1,-1)$                       [B]  $(7,1)$   
 [C]  $(3,2)$                       [D]  $(5,3)$

12. spring9823a, P.I. G.G.54

A design was constructed by using two rectangles  $ABDC$  and  $A'B'D'C'$ . Rectangle  $A'B'D'C'$  is the result of a translation of rectangle  $ABDC$ . The table of translations is shown below. Find the coordinates of points  $B$  and  $D'$ .

Rectangle $ABDC$	Rectangle $A'B'D'C'$
A $(2,4)$	$A'$ $(3,1)$
B	$B'$ $(-5,1)$
C $(2,-1)$	$C'$ $(3,-4)$
D $(-6,-1)$	$D'$

13. 060129b, P.I. G.G.61

Two parabolic arches are to be built. The equation of the first arch can be expressed as  $y = -x^2 + 9$ , with a range of  $0 \leq y \leq 9$ , and the second arch is created by the transformation  $T_{7,0}$ . On the accompanying set of axes, graph the equations of the two arches. Graph the line of symmetry formed by the parabola and its transformation and label it with the proper equation.

