

G.CO.A.5: Translations 1a

- 1 What is the image of the point $(-5,2)$ under the translation $T_{3,-4}$?
 - 1) $(-9,5)$
 - 2) $(-8,6)$
 - 3) $(-2,-2)$
 - 4) $(-15,-8)$

- 2 When the transformation $T_{2,-1}$ is performed on point A , its image is point $A'(-3,4)$. What are the coordinates of A ?
 - 1) $(5,-5)$
 - 2) $(-5,5)$
 - 3) $(-1,3)$
 - 4) $(-6,-4)$

- 3 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?
 - 1) $(0,-9)$
 - 2) $(-5,-3)$
 - 3) $(-6,-1)$
 - 4) $(-6,-9)$

- 4 The image of point $(-2,3)$ under translation T is $(3,-1)$. What is the image of point $(4,2)$ under the same translation?
 - 1) $(-1,6)$
 - 2) $(0,7)$
 - 3) $(5,4)$
 - 4) $(9,-2)$

- 5 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
 - 1) $(-6,12)$
 - 2) $(-5,4)$
 - 3) $\left(-\frac{3}{2}, \frac{1}{3}\right)$
 - 4) $(-1,-8)$

- 6 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
 - 1) $(7,1)$
 - 2) $(5,3)$
 - 3) $(3,2)$
 - 4) $(1,-1)$

- 7 The image of $\triangle ABC$ under a translation is $\triangle A'B'C'$. Under this translation, $B(3,-2)$ maps onto $B'(1,-1)$. Using this translation, the coordinates of image A' are $(-2,2)$. Determine and state the coordinates of point A .

- 8 A design was constructed by using two rectangles $ABDC$ and $A'B'C'D'$. Rectangle $A'B'C'D'$ 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 $A'B'C'D'$
A $(2,4)$	A' $(3,1)$
B	B' $(-5,1)$
C $(2,-1)$	C' $(3,-4)$
D $(-6,-1)$	D'

G.CO.A.5: Translations 1a
Answer Section

1 ANS: 3

$$-5 + 3 = -2 \quad 2 + -4 = -2$$

REF: 011107ge

2 ANS: 2

REF: 011617ge

3 ANS: 1

$$(x, y) \rightarrow (x + 3, y - 4).$$

REF: 060309a

4 ANS: 4

$$(x, y) \rightarrow (x + 5, y - 4).$$

REF: 010614a

5 ANS: 4

$$(x, y) \rightarrow (x + 2, y - 6).$$

REF: 080508b

6 ANS: 1

$$(x, y) \rightarrow (x + 3, y + 1)$$

REF: fall0803ge

7 ANS:

$$T_{-2,1} A(0,1)$$

REF: 081431ge

8 ANS:

$$B(-6,4), D'(-5,-4). (x, y) \rightarrow (x + 1, y - 3).$$

REF: spring9823a