Warm Up

Find the coordinates of the image of ΔABC with vertices $A(3, 4)$, $B(-1, 4)$, and $C(5, -2)$, after each reflection.

1. across the x-axis

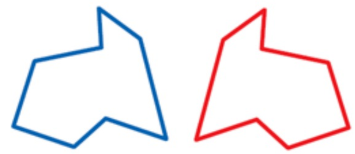
2. across the y-axis

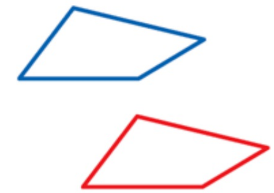
3. across the line $y = x$

9-2 Translations

A [ ] is a transformation where all the points of a figure are moved the same [ ] in the same [ ]. A translation is an [ ], so the [ ] of a translated figure is [ ] to the [ ]

Tell whether each transformation appears to be a translation. Explain.

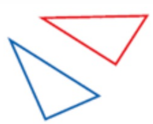




Holt McDougal Geometry

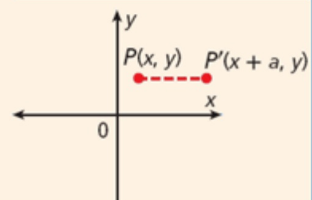
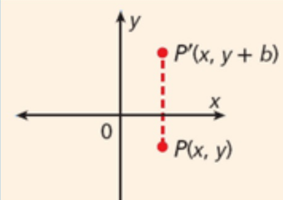
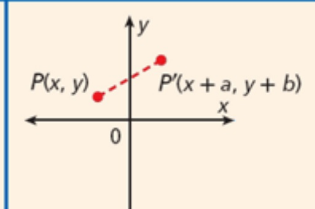
9-2 Translations

Tell whether each transformation appears to be a translation.



Holt McDougal Geometry

Translations in the Coordinate Plane

HORIZONTAL TRANSLATION ALONG VECTOR ⟨a, 0⟩	VERTICAL TRANSLATION ALONG VECTOR ⟨0, b⟩	GENERAL TRANSLATION ALONG VECTOR ⟨a, b⟩
		

Holt McDougal Geometry

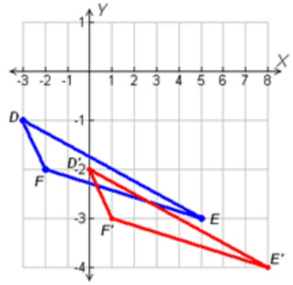
Translate the triangle with vertices *D*(–3, –1), *E*(5, –3), and *F*(–2, –2)

The image of (*x*, *y*) is

D(–3, –1)

E(5, –3)

F(–2, –2)



Graph the preimage and the image.

Translate the quadrilateral with vertices *R*(2, 5), *S*(0, 2), *T*(1,–1), and *U*(3, 1) along the vector <–3, –3>.

Also written like this

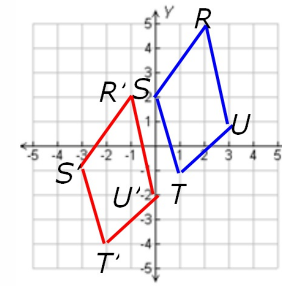
The image of (*x*, *y*) is (*x* – 3, *y* – 3).

R(2, 5)

S(0, 2)

T(1, –1)

U(3, 1)



Graph the preimage and the image.

5. A rook on a chessboard has coordinates (3, 4). The rook is moved up two spaces. Then it is moved three spaces to the left. What is the rook's final position? What is the rule for the translation that moves the rook from its starting position to its final position?

Lesson Quiz: Part I

1. Tell whether the transformation appears to be a translation.

Translate the figure with the given vertices according to the given translation

3. *G*(8, 2), *H*(–4, 5), *I*(3,–1); along the vector <-2,0>

4. *S*(0, –7), *T*(–4, 4), *U*(–5, 2), *V*(8, 1); along the vector <-4, 5>