Find the values of x, y, and z.

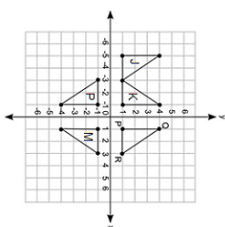a. $x = 104°; y = 76°; z = 66°$

b. $x = 38°; y = 142°; z = 66°$

c. $x = 104°; y = 29°; z = 66°$

d. $x = 76°; y = 104°; z = 0°$
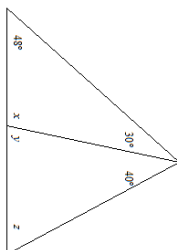
Find the values of x, y, and z.

a. $x = 40°; y = 140°; z = 62°$

b. $x = 78°; y = 102°; z = 0°$

c. $x = 102°; y = 30°; z = 62°$

d. $x = 102°; y = 78°; z = 62°$

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The figure shows triangle PQR and some of its transformed images on a coordinate grid:

Which of the four triangles was formed by a translation of triangle PQR?

a. P

b. K

c. M

d. J

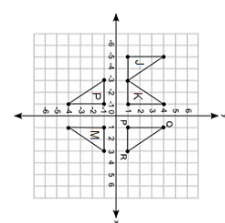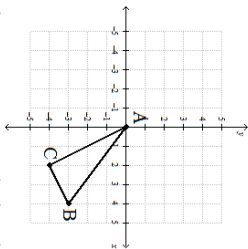
The figure shows triangle PQR and some of its transformed images on a coordinate grid:

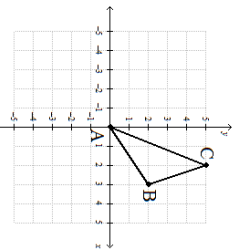Which of the four triangles was formed by a reflection of triangle PQR over the x-axis?

a. P

b. K

c. J

d. M

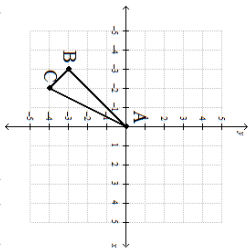Triangle *ABC* is translated 3 units left and 1 units up. Which algebraic rule matches this translation?

a. $T(x,y) \rightarrow (x-3, y-1)$
b. $T(x,y) \rightarrow (x+3, y-1)$
c. $T(x,y) \rightarrow (x-3, y+1)$
d. $T(x,y) \rightarrow (x+3, y+1)$

Triangle *ABC* is translated 2 units right and 3 units up. Which algebraic rule matches this translation?

a. $T(x,y) \rightarrow (x+2, y-3)$
b. $T(x,y) \rightarrow (x-2, y-3)$
c. $T(x,y) \rightarrow (x+2, y+3)$
d. $T(x,y) \rightarrow (x-2, y+3)$

Triangle *ABC* is translated 6 units left and 2 units down. Which algebraic rule returns it to its original location?
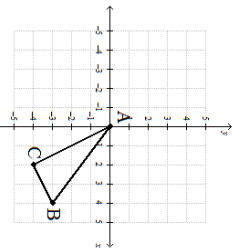

a. $T(x,y) \rightarrow (x-6, y+2)$
b. $T(x,y) \rightarrow (x+6, y-2)$
c. $T(x,y) \rightarrow (x+6, y+2)$
d. $T(x,y) \rightarrow (x-6, y-2)$

Triangle *ABC* is translated 4 units left and 7 units up. Which algebraic rule returns it to its original location?

a. $T(x,y) \rightarrow (x-4, y-7)$
b. $T(x,y) \rightarrow (x+4, y-7)$
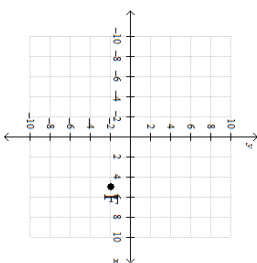c. $T(x,y) \rightarrow (x+4, y+7)$
d. $T(x,y) \rightarrow (x-4, y+7)$

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Point *G'* is the image of G(−7, 1) under a reflection across the *x*-axis. What are the coordinates of the image.

a. (−7, 1)
b. (−7, −1)

c. (7, −1)
d. (7, 1)

Point *D'* is the image of D(6, 2) under a reflection across the *y*-axis. What are the coordinates of the image.

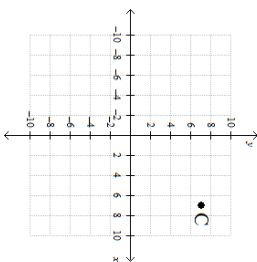a. (−6, −2)
b. (6, 2)

c. (6, −2)
d. (−6, 2)

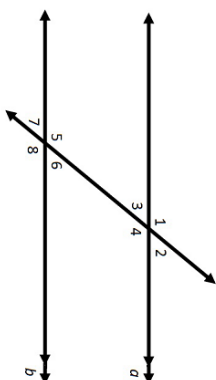What are the coordinates of *F'* after point *F* is reflected across the *y*-axis.

a. (−5, −2)
b. (−5, 2)

c. (5, −2)
d. (5, 2)

What are the coordinates of *C'* after point *C* is reflected across the *x*-axis.
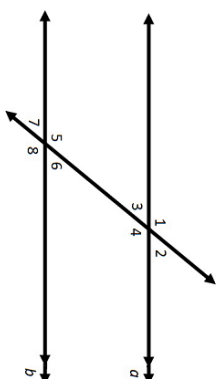
a. (7, −7)
b. (−7, −7)

c. (7, 7)
d. (−7, 7)

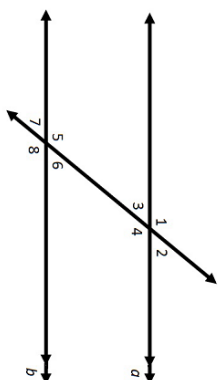Which of the following angle pairs are identified correctly?

a. Alternate Interior: $\angle 4$ and $\angle 5$
b. Alternate Exterior: $\angle 1$ and $\angle 8$
c. Corresponding: $\angle 4$ and $\angle 6$
d. Consecutive Interior: $\angle 8$ and $\angle 4$

Which of the following angle pairs are identified correctly?

a. Alternate Exterior: $\angle 6$ and $\angle 3$
b. Consecutive Interior: $\angle 4$ and $\angle 6$
c. Alternate Interior: $\angle 2$ and $\angle 7$
d. Corresponding: $\angle 7$ and $\angle 3$

Which of the following angle pairs are identified incorrectly?

a. Alternate Exterior: $\angle 5$ and $\angle 4$
b. Corresponding: $\angle 3$ and $\angle 7$
c. Alternate Interior: $\angle 7$ and $\angle 2$
d. Consecutive Interior: $\angle 5$ and $\angle 3$

Which of the following angle pairs are identified incorrectly?
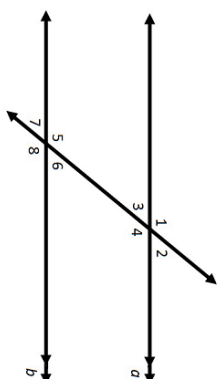
a. Alternate Interior: $\angle 3$ and $\angle 6$
b. Corresponding: $\angle 4$ and $\angle 6$
c. Alternate Exterior: $\angle 7$ and $\angle 2$
d. Consecutive Interior: $\angle 8$ and $\angle 4$

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Triangle *ABC* is translated 6 units left and 1 units down. Which of the following locations for the image are correct?
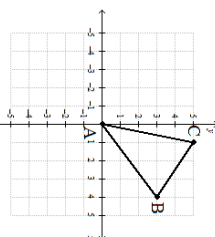
a. $A'(-5,-2)$
b. $C'(-6,3)$
c. $A'(-6,-1)$

d. $B'(-2,2)$
e. $C'(-5,4)$
f. $B'(-1,1)$

Triangle *ABC* is translated 2 units right and 2 units down. Which of the following locations for the image are correct?
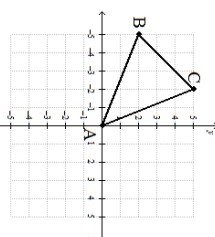

a. $C'(-1,2)$
b. $A'(1,-1)$
c. $A'(2,-2)$

d. $C'(0,3)$
e. $B'(-3,0)$
f. $B'(-4,-1)$

Triangle *ABC* is translated 3 units right and 4 units up to form triangle *A'B'C'*. Which of the following are correct about the image?
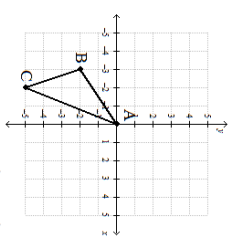

a. The perimeter is the same.
b. The perimeter is different.
c. The orientation is different.
d. The area is the same.

e. The area is different.
f. The location is different.
g. The location is the same.
h. The orientation is the same.

Triangle *ABC* is translated 2 units left and 2 units up to form triangle *A'B'C'*. Which of the following are not correct about the image?
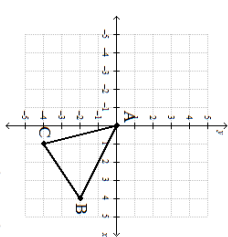

a. The area is the same.
b. The orientation is different.
c. The location is different.
d. The location is the same.

e. The area is different.
f. The perimeter is the same.
g. The orientation is the same.
h. The perimeter is different.

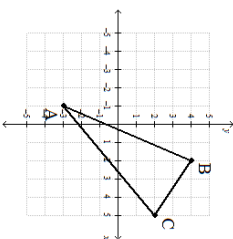When the line of reflection is $y = x$, which of the following are correct?
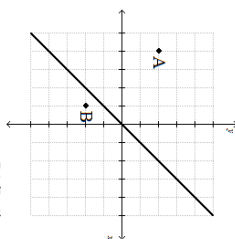
a. $A'(-2, -4)$
b. $A'(2, 4)$
c. $B'(-2, 1)$
d. $B'(-2, -1)$

e. $B'(2, 1)$
f. $B'(2, -1)$
g. $A'(2, -4)$
h. $A'(-2, 4)$

When the line of reflection is $y = x$, which of the following are correct?
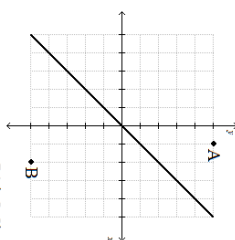
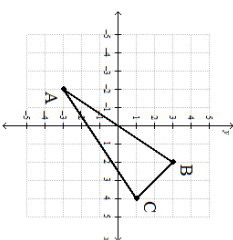a. $B'(5, -2)$
b. $A'(-5, -1)$
c. $A'(5, -1)$
d. $B'(-5, -2)$

e. $B'(-5, 2)$
f. $A'(5, 1)$
g. $A'(-5, 1)$
h. $B'(5, 2)$

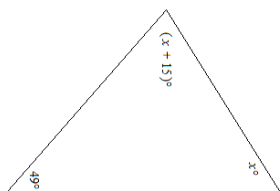When triangle ABC is rotated 180 degrees clockwise about the origin, which of the following are true?

a. $C'(5, 2)$
b. $A'(-1, -3)$
c. $C'(-5, -2)$

d. $B'(-2, -4)$
e. $B'(2, 4)$
f. $A'(1, 3)$

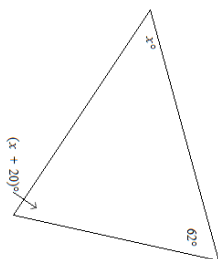When triangle ABC is rotated 180 degrees counter clockwise about the origin, which of the following are true?

a. $C'(4, 1)$
b. $B'(-2, -3)$
c. $C'(-4, -1)$

d. $B'(2, 3)$
e. $A'(2, 3)$
f. $A'(-2, -3)$
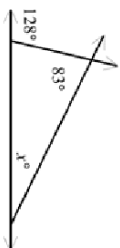
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Find the value of x.

What is the value of x? (The figure may not be drawn to scale.)
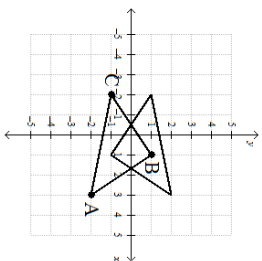

Find the value of x.

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What is the value of x? (The figure may not be drawn to scale.)

Complete the equation for the line of reflection in the following graph.

$y=$ ____
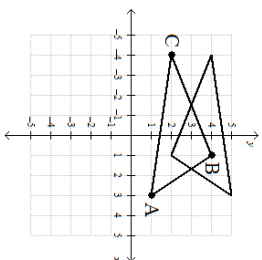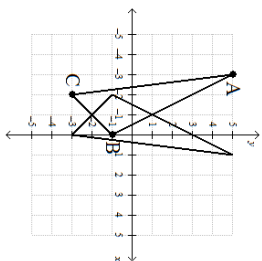
Complete the equation for the line of reflection in the following graph.

$x=$ ____

Complete the equation for the line of reflection in the following graph.

$y=$ ____

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Complete the equation for the line of reflection in the following graph.

$x=$ ____