

Unit 1 Review

Name _____

Period _____

Define the following:

1. Transformation: _____
2. Translation: _____
3. Reflection: _____
4. Rotation: _____
5. Dilation: _____
6. Pre-Image: _____
7. Image: _____
8. Similar: _____
9. Congruent: _____
10. Scale Factor: _____
11. Prime Symbol: _____
12. Line of Symmetry: _____

13. $\triangle ABC$ is dilated by a scale factor of 3. If \overline{AB} is 5 units long, how long is $\overline{A'B'}$?

$\overline{A'B'}$ is _____ units long

14. Triangle XYZ is translated 7 units up and 4 units to the right. What statement

is *not* true about the image created, triangle X'Y'Z' ?

- A. The triangles are congruent.
- B. \overline{YZ} is congruent to $\overline{Y'Z'}$.
- C. The perimeter of XYZ equals the perimeter of X'Y'Z'
- D. Eight times XZ equals X'Z'.

15. A triangle has vertices A(8, 9), B(8, 1), C(1, 1). If the triangle is rotated clockwise 180 degrees around (0, 0), what are the coordinates of C' ?

F. (1, -1)

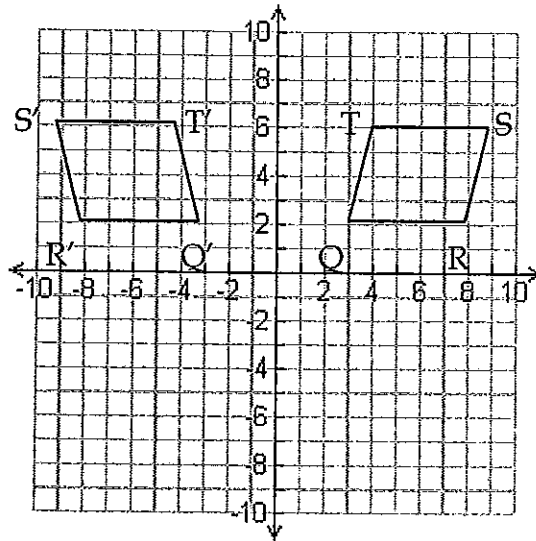
G. (-1, 1)

H. (1, 1)

J. (-1, -1)

Use the transformation below for questions 16-18.

Parallelogram QRST is reflected over the y-axis to create parallelogram Q'R'S'T'.

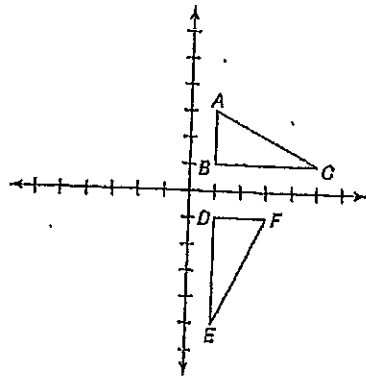


16. Which angle is congruent to $\angle S$?
- $\angle T$
 - $\angle R'$
 - $\angle S'$
 - $\angle T'$
17. Which side is congruent to \overline{QT} ?
- $\overline{Q'T'}$
 - \overline{ST}
 - $\overline{Q'R'}$
 - \overline{QR}
18. \overline{QR} is parallel to \overline{TS} . Which side is parallel to $\overline{Q'R'}$?
- $\overline{S'R'}$
 - $\overline{S'T'}$
 - $\overline{Q'T'}$
 - \overline{RS}

19. What are the coordinates of the image of point $(4, 7)$ after a translation 3 units down followed by a reflection over the y -axis?

- A. $(4, -4)$
- B. $(-4, 4)$
- C. $(4, -7)$
- D. $(-4, 10)$

Use the diagram below for questions 20-21.



20. How has figure DEF been transformed to form figure ABC?

- A. Reflection across the x -axis
- B. 180 degree rotation around $(0, 0)$
- C. 90 degree counter-clockwise rotation around $(0, 0)$
- D. translation 2 units down

21. If triangle DEF is reflected across the y -axis, what are the new coordinates of point D?

- A. $(-1, -1)$
- B. $(1, 1)$
- C. $(-1, 1)$
- D. $(3, 1)$

Use the graph below :

22. Plot the points A(-5, 1), B(-1, 1), and C(-1, 5) on the coordinate plane below.

- Reflect $\triangle ABC$ over the x-axis. State the new coordinates of the figure.

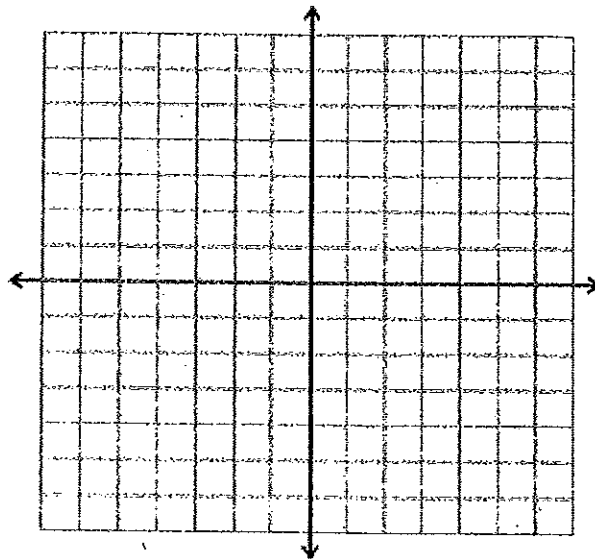
A' _____ B' _____ C' _____

- Translate $\triangle A'B'C'$ 6 units right. State the new coordinates of the figure.

A'' _____ B'' _____ C'' _____

- Rotate $\triangle A''B''C''$ 90° counterclockwise around the origin. State the new coordinates of the figure.

A''' _____ B''' _____ C''' _____



23. A triangle has coordinates A(-2, -1), B(-1, 2), and C(1, -2). If the triangle is reflected across the x-axis, what are the new coordinates of the triangle.

- A. A'(-2, -1), B'(-1, 2), C'(1, -2)
- B. A'(2, -1), B'(1, 2), C'(-1, -2)
- C. A'(-2, 1), B'(-1, -2), C'(1, 2)
- D. A'(2, 1), B'(1, -2), C'(-1, 2)