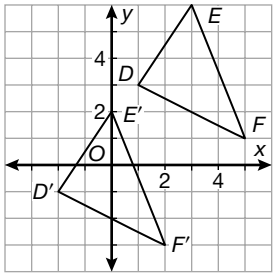
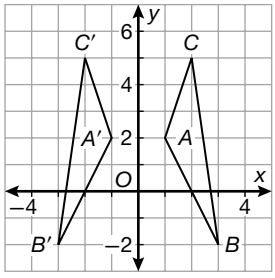
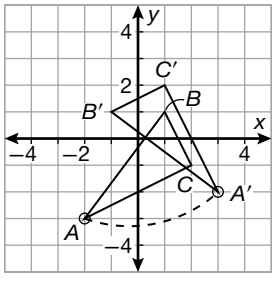
Warm Up 78

1. transformation

2. 

3. 

Lesson Practice 78

a. 

$A'(3, -2)$, $B'(-1, 1)$, $C'(1, 2)$

b. $(-2, 4)$, $(-3, 2)$, and $(-5, 3)$

c. 257°; The spokes divide the circle into 7 angles, each measuring 51.4°. The spoke moves 5 places counterclockwise, so the angle of rotation is $5 \times 51.4°$.

Practice 78

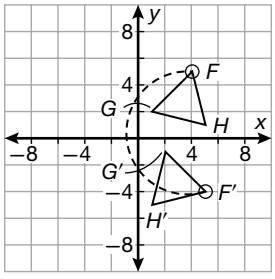
1. $x^2 + y^2 = 49$

2. C

3. $x = 4$

4. Robin is correct; Gustavo forgot that the 30°-60°-90° triangle only represents one half of each of the six equilateral triangles.

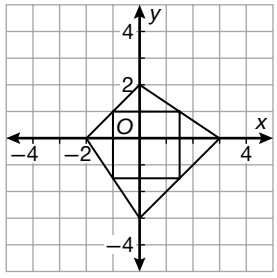
5. D

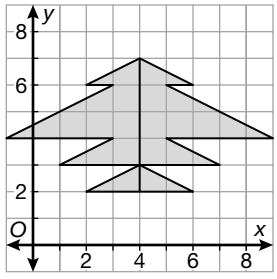
6. 

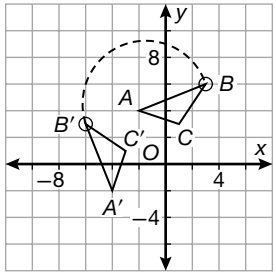
$F'(5, -4)$, $G'(2, -1)$, $H'(1, -5)$

7. It has no lines of symmetry and no rotational symmetry.

8. $y = 3x - 3$

9. Sample: 

10. 

11. 

;

$A'(-4, -2)$, $B'(-6, 3)$, $C'(-3, 1)$

12. $x = 51$, $y = 51$, $z = 39$

13. $V = \frac{1}{3}\pi r^3$

14. about 25 gallons

15. $x = 18.8\overline{3}$, $V = 19{,}773$; $S \approx 5823$

16. obtuse; See student work. Students should sketch an obtuse triangle with the orthocenter shown.

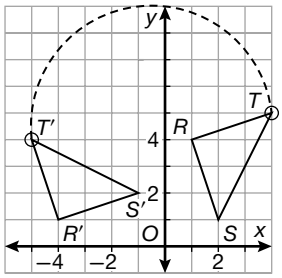
17. 44, 454 ft

18. $m\angle L > m\angle I$

19. 282.6 cm^2

20. $AC = CD = 9$; $CE = BC = 11$

21.



22. 2.2

23. Maribeth is 104 ft away; Claudia is 180 ft away.

24. about 540 bricks

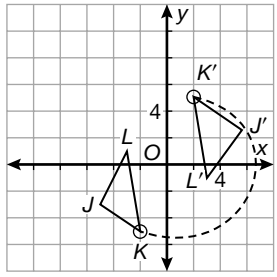
25. Therefore, the mail will not be delivered today; Law of Detachment

26. for all even values of n

27. $x = 11$

28. 9°

29.



30. The slant height, the height, and the radius of a cone form a right triangle with the slant height as the hypotenuse. Since the hypotenuse of a right triangle is always longer than the legs of the triangle, the slant height is always longer than the height of a cone.