Warm Up 71

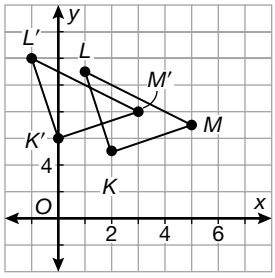
1. preimage, image
2. translation
3. **a.** slope of $\overline{RS} = 2$

   b. length of $\overline{RS} = 3\sqrt{5}$

Lesson Practice 71

a. $A'(11, 10)$ and $B'(4, 14)$

b.



$K'(0, 6)$, $L'(-1, 12)$, $M'(3, 8)$

c. $A'(5, 5)$, $B'(10, 5)$, $C'(13, 7)$, $D'(8, 7)$

d. $\langle 8, 1 \rangle$

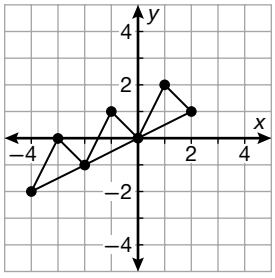
Practice 71

1. If X is connected to Y, then the result is a rhombus, because the diagonals of a rhombus bisect the opposite angles and also meet at a right angle.

2. $50\ \text{cm}^3$

3. not a triangle

4. 2.82 cm

5. 

6. $x = -4$ and $y = -17$

7. $P'(2, 9)$ and $Q'(-8, -1)$

8. rhombus

9. $2\sqrt{5}$

10. $15\ \text{ft}^2$

11. 7.5 in.

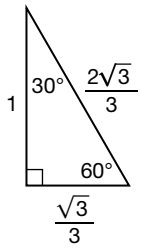
12. $y = \frac{1}{6}x + \frac{-31}{6}$

13. If a triangle is not equilateral, then the sides are not congruent.

14. Reflect the figure in the horizontal line; reflect the figure in the vertical line; rotate the figure 180° about the intersection of the two lines.

15. $308{,}583\ \text{ft}^3$

16. C

17. 

18. For angles between 0° and 45°, the tangent ratio is less than 1. For angles between 45° and 90°, the tangent ratio is greater than 1.

19. $SU = ST = 1.75\sqrt{2} \approx 2.47$

20. $36\sqrt{3}\ \text{ft}^2$

21. AC is the greatest side length of $\triangle ABC$. Since $\overline{AB}$ and $\overline{BC}$ are congruent, $\angle A$ and $\angle C$ must also be congruent at 40° each. Therefore, by the Triangle Angle Sum Theorem, $m\angle B$ is 100°. So $\overline{AC}$ is the longest since it is across from the longest side, while $\overline{AB}$ and $\overline{BC}$ are shorter but equal.

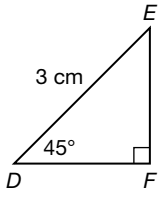
22. A

23. $WX = 6$ cm

24. C

25. $\langle -2, -2 \rangle$

26. a.



b. $\frac{3\sqrt{2}}{2} \approx 2.12$

27. approximately 120 m^2

28. rhombus

29. *y, z, x*

30. a. $\frac{1}{6}$

b. 0.5