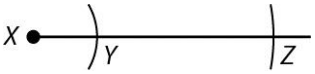
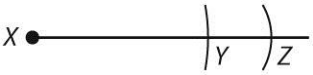
UNIT 7 Transformations and Congruence

MODULE 16 Tools of Geometry

LESSON 16-1

Practice and Problem Solving: A/B

1. 

2. 

3. $CD = \sqrt{17}$; $EF = \sqrt{13}$; $\overline{CD}$ and $\overline{EF}$ are not the same length.

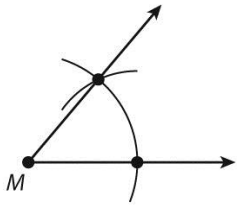
4. $GH = 2\sqrt{5}; JK = \sqrt{17}$; $\overline{GH}$ and $\overline{JK}$ are not the same length.

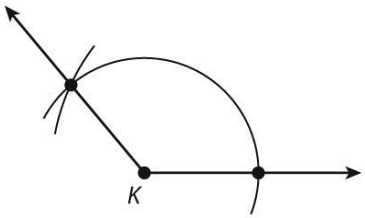
5. $M\left(\frac{7}{2}, \frac{1}{2}\right)$; Quadrant I

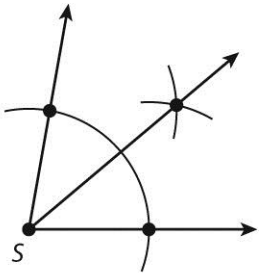
6. $M\left(-5, \frac{1}{2}\right)$; Quadrant II

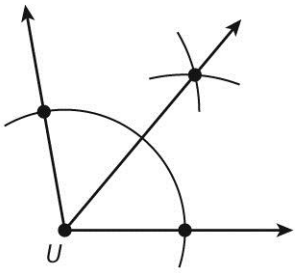
LESSON 16-2

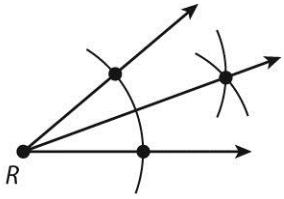
Practice and Problem Solving: A/B

1. 

2. 

3. 

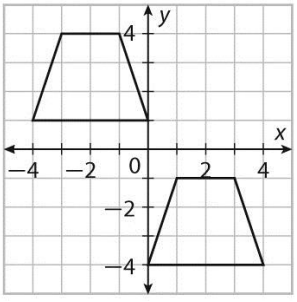
4. 

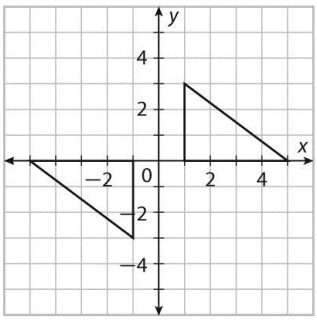
5. 

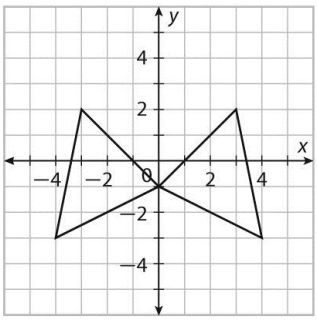
6. Use a straightedge to extend the length of each side of the angle. Place the center point of the protractor at the vertex of the angle. Turn the protractor so that one side of the angle aligns with the 0° mark on the protractor. Identify the degree mark on the protractor that aligns with the other side of the angle. This degree mark is the measure of the angle.
7. 90°; right angle
8. 140°; obtuse angle
9. 42°; acute angle

LESSON 16-3

Practice and Problem Solving: A/B

1. $P'(2, 4)$, $Q'(1, 1)$, $R'(5, 2)$
2. $\left(\frac{1}{2}x, 3y\right)$
3. reflection across the y-axis
4. rotation of 180° about the origin
5. rotation of 90° clockwise about the origin
6. translation right 9 and up 2
7. 

8. 

9. 

LESSON 16-4

Practice and Problem Solving: A/B

1. Seg. Add. Post.
   Subst. Prop. of =
   Simplify.
   Add. Prop. of =
   Subtr. Prop. of =
   Div. Prop. of =
2. Possible answers: zero, any negative number
3. 45°-45°-90° triangle
4. Each item, starting with the third, is the product of the two preceding items; 256, 8192.
5. The dot skips over one vertex in a clockwise direction.