

**Warm Up 40**

1. area
2. 150 mm
3. B

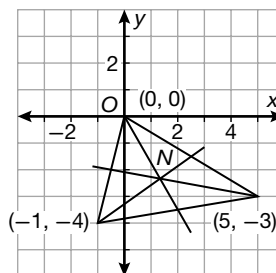
**Lesson Practice 40**

- a. 20 in.
- b.  $(16 + 2\pi) \text{ cm}^2$
- c.  $(11.5 + 2\pi) \text{ cm}^2$
- d. 1320 ft
- e.  $60,000 \text{ ft}^2$

## Practice 40

- $m = 2; y = -\frac{1}{2}x + 1$
- The hypotenuse is always the longest side and would be the 75 cm length.
- obtuse
- $y = -4x$
- 36 mm,  $81 \text{ mm}^2$ ;  
60 mm,  $117 \text{ mm}^2$
- The statement  $p$  is false, because otherwise the Law of Detachment would fail.
- $\triangle HJK$  and  $\triangle LNM$  are right triangles; hypotenuses  $\overline{HJ}$  and  $\overline{LN}$  are congruent; and legs  $\overline{HK}$  and  $\overline{LM}$  are congruent; so by the Hypotenuse-Leg Congruence Theorem,  $\triangle HJK \cong \triangle LNM$ .
- 252 square millimeters

9.



- $7\sqrt{10}$
- $QV = 21, TW = 6$
- $89^\circ$
- The angle across from the 31-yard side.
- 3.98 units
- Lily claims the triangles are congruent by AAA, but only ASA, AAS, SSS, and SAS can be used to determine congruence.
- $(14 + 7\pi) \text{ in.},$   
 $(40 + 14.5\pi) \text{ in}^2$
- $\angle P, \angle E, \angle S$

18. Since  $\angle V$  and  $\angle Y$  are right angles,  $\triangle UVW$  and  $\triangle XYZ$  are right triangles; hypotenuses  $\overline{UW}$  and  $\overline{XZ}$  are congruent; acute angles  $\angle U$  and  $\angle X$  are congruent; by the Hypotenuse-Angle Congruence Theorem,  $\triangle UVW \cong \triangle XYZ$ .
19. one eighth of a full rotation; 8 cameras
20.  $x = 4$ ; 5
21. 1 ft 6 in.
22. D
23. The exterior angles will always sum to  $360^\circ$ , so as we increase the number of sides, the number of exterior angles will increase so that there are fewer degrees for each angle.
24. Since  $8 + 8 = 16$ , these three side lengths cannot form a triangle.
25. 30 in.
26.  $48 \text{ in}^2$
27.  $x = 1$
28. 49.24 miles
29. 10.44
30. 7.62