

**Warm Up 69**

1. kite
2. 38 square units
3. 4 inches

**Lesson Practice 69**

- a.  $CD = 54$  in.
- b.  $m\angle Q = 132^\circ$ ,  
 $m\angle S = 48^\circ$ , and  
 $m\angle T = 132^\circ$
- c.  $MQ = 7.9$  yd
- d.  $FG = FJ \approx 4.5$ ;  
 $GH = HJ \approx 7.3$
- e. 50 m

## Practice 69

- $FL = 40$  ft
- The distances from  $W$  to  $X$  and from  $Y$  to  $Z$  are equal, as are the distances from  $X$  to  $Y$  and from  $Z$  to  $W$ .
- $x > 40$
- 14 mph
- Since  $\overline{AP}$ ,  $\overline{BP}$ ,  $\overline{EP}$ , and  $\overline{FP}$  are all radii of the circle, there are pairs of congruent sides, so the Hinge Theorem can be used to find the largest angle. With  $\overline{AB}$  longer than  $\overline{EF}$ ,  $\angle APB$  is the larger angle.
- hypothesis:  
 $x^2 + 16 = 25$ ;  
conclusion:  $x = 3$
- $\frac{1}{2}$ ;  $\frac{1}{2}$
- rectangular container
- 2 reflections, 4 rotations
- $74^\circ$
- A
- 308 tiles
- No, because a calendar either has 365 or 366 days, neither of which is divisible by 7, so there will never be an equal number of each day of the week represented on a calendar.
- $RS \approx 8.5$ ;  $ST \approx 8.5$ ;  
 $TU \approx 11.7$ ;  $UR \approx 11.7$
- He counted diagonal lines as 1;  
 $P = 21 + 7\sqrt{2} + \sqrt{5}$
- 8
- $x = 38^\circ$
- isosceles trapezoid;  
20 square units
- $UW = 51.7$  inches
- Sample: approximately  $35^\circ$ ,  $85^\circ$ , and  $60^\circ$ . The triangle is acute. See student work.

21. 10
22.  $340 \text{ in}^3$
23.  $PZ = y$
24.  $x = 37; y = 23$
25.  $m\angle A = 87^\circ, m\angle B = 93^\circ,$   
and  $m\angle D = 87^\circ$
26.  $\sin b = \frac{8}{17}; \cos b = \frac{15}{17};$   
 $\tan b = \frac{8}{15}$
27. perpendicular
28. No, you do not,  
because the sine and  
cosine depend only the  
ratio of side lengths, not  
the actual lengths.
29.  $x = 65^\circ$
30. D