

Warm Up 66

1. altitude
2. 28 in^2
3. A
4. area = 300 cm^2 ;
perimeter = 70 cm

Lesson Practice 66

- a. 256 yd
- b. 617.5 ft^2
- c. $864\sqrt{3} \text{ ft}^2$
- d. $36\sqrt{3} \text{ m}^2$
- e. $9126\sqrt{3} \text{ ft}^2$ or
 $1014\sqrt{3} \text{ yd}^2$

Practice 66

1. Assume \overline{XA} is an altitude. Then \overline{XA} is perpendicular to \overline{YZ} . Since perpendicular segments form four right angles, then $m\angle 1 = m\angle 2$, but it is given that $m\angle 1 \neq m\angle 2$, so we have a contradiction. Thus, \overline{XA} is not an altitude of $\triangle XYZ$.
2. 20 million square inches
3. sometimes
4. $x = 110\sqrt{3}$, $y = 220$
5. They meet at a right angle.
6. $\frac{1}{162}$
7. 18
8. 6
9. 7900 miles
10. The vector moves points over 2 and up 3, so the vector will move any point on the line.
11. $x = 72^\circ$
12. $\frac{17}{26} \approx 0.65$
13. $x = \frac{2}{3}$; $JK = \frac{11}{3}$ or $3\frac{2}{3}$;
 $FH = \frac{22}{3}$ or $7\frac{1}{3}$
14. 4:7
15. In the two triangles, $KL = KP$, as they are radii of the smaller circle, and $KM = KN$, as they are radii of the larger circle. The longer side will therefore be the one across from the larger contained angle, so \overline{LM} is the longer side.
16. 539 ft
17. $u = 2$ and $v = 1$, or
 $u = \frac{7}{3}$ and $v = \frac{5}{3}$
18. rhombus
19. rectangle

20. D
21. “Midpoint Theorem” should be “Definition of Midpoint” and “Corresponding Segments Postulate” should be “Segment Addition Postulate.”
22. B
23. $x = 73^\circ$
24. $x = 4; y = 8$
25. Though $\angle A Y F$ and $\angle A X H$ are both right angles, it is not known that $Y, A,$ and X are collinear.
26. 1.5π
27. approximately 5400 mints
28. 6.71
29. Since DE and JK are parallel, $\frac{LD}{DJ} = \frac{LE}{EK}$. $DJ = 4.5$.
30. $P = 136\sqrt{3}$ ft; $A = 2312\sqrt{3}$ ft²