

Warm Up 22

1. height
 2.
 - a. right triangle
 - b. equilateral triangle
 - c. obtuse isosceles triangle
 3.
 - a. trapezoid
 - b. parallelogram
 - c. rhombus
 4. 1
- g. Since the cafeteria is a rhombus, he should measure the base and height, or the diagonals of the cafeteria.

Lesson Practice 22

- a. 112 yd^2
- b. 64 ft^2
- c. 227.5 cm^2
- d. 10 yd^2
- e. 44 in^2
- f. 4 m

Practice 22

1. 300 in^2
2. a. Yes, the corresponding sides and angles are the same.
b. No, one is larger than the other.
3. C
4. The game involving Allentown and Holdenville was decided by one run.
5. a. 196 cm^2
b. 160 in^2
6. a. If $x = -6$, then $x + 11 = 5$; true
b. If I bring my umbrella to work, then it rains; not necessarily true
7. 59° ; The measures of the interior angles of a triangle add up to 180° .
8. a. true
b. false
c. false
d. true
9. $90^\circ, 20^\circ, 70^\circ$
10. It is Mrs. Wu's turn to drive the children to their piano lesson.
11. approximately 93 miles
12. a. Two angles are congruent if and only if they have the same measure.
b. A triangle is equilateral if and only if it has three lines of symmetry.
13. disjunction
14. a. 216 ft^2
b. 160 yd^2
15. a. $y = -2x + 5$
b. $y = \frac{1}{2}x + 9$

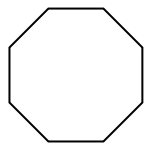
16. a. isosceles
b. scalene

17. The race covers 24 miles.

18. She has switched the slope and the y -intercept. The correct equation is $y = 3x + 2$.

19. a. No, the same-side interior angles do not add to 180° .
b. Yes, the same-side interior angles add to 180° .

20. See student work; yes; A polygon that is both equilateral and equiangular is regular by definition.



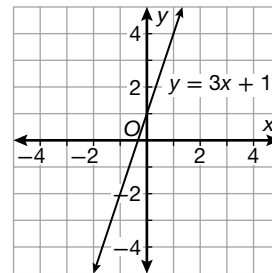
21. 60 ft^2

22. $AB_{\text{midpoint}} = \left(\frac{9}{2}, \frac{5}{2}\right)$;

$AC_{\text{midpoint}} = \left(\frac{13}{2}, 13\right)$;

$BC_{\text{midpoint}} = \left(6, \frac{13}{2}\right)$

23.



24. a. hypothesis: Today is Wednesday;
conclusion: Jasmine needs to take out the trash.
b. hypothesis: $x - 3 = 5$;
conclusion: $x = 8$

25. The fire station at point B should respond.

26. If Mark's pen runs out of ink, then he must go to the store.

27. $25^\circ\text{C} = 80^\circ\text{F}$;
 $-30^\circ\text{C} = -30^\circ\text{F}$

28. 912 ft^2

29. acute: 54° ; obtuse: 126°

30. Sample: Conjecture:
There is exactly one
unique line through
point P not on l that is
parallel to l .

