

**Warm Up 107**

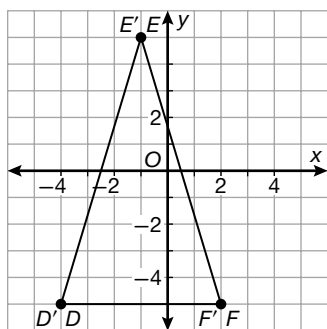
1. apothem
2. The rectangle
3. A

**Lesson Practice 107**

- a.  $567 \text{ in}^2$ ,  $720 \text{ in}^2$ ,  $972 \text{ in}^2$
- b.  $1296 \text{ in}^2$
- c. The triangle with side lengths of 6, 8, 8 has a greater area, because it is closer to an equilateral triangle.
- d. 25 by 25 tiles

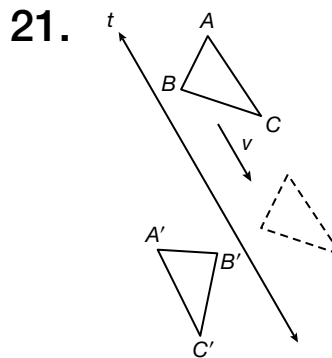
## Practice 107

1.  $33^\circ$
2.  $55.5 \text{ in}^2$
3. The perimeter of both triangles is 12 inches. The equilateral triangle will have the greater area. The area of Triangle  $A$  is  $6 \text{ in}^2$  and the area of Triangle  $B$  is about  $6.9 \text{ in}^2$
4. pentagonal prism
5.  $x = 45^\circ$
6. Sample:  $-1, -2$
7.  $\begin{bmatrix} -4 & -1 & 2 \\ -5 & 5 & -5 \end{bmatrix}$



8.  $10.4 \text{ cm}^2$
9. 1 to 3

10.  $\frac{1}{2}$
11. Sample: square inscribed in a square; square circumscribed about a square
12.  $\frac{4}{5}$
13. B
14.  $45^\circ$
15. Jeremy is incorrect; the correct answer is  $5\sqrt{2}$  in.
16. 45.6 ft
17. 6
18.  $75\pi$
19.  $x = 5$
20.  $V = \frac{1}{6}\pi h \left(\frac{7r^2}{4}\right)$



22. 
$$\begin{bmatrix} 35 & 48 \\ -13 & -31 \end{bmatrix}$$

23. AAS-congruence; All right triangles have a right angle, and all right angles are congruent. If another pair of angles are congruent and the hypotenuses are congruent, that is two angles in a row followed by a side, or AAS.

24. 
$$t = \frac{\sqrt{1-c^2}}{c}, t = \frac{s}{\sqrt{1-s^2}}$$

25. 41.1

26. sometimes

27. 
$$(x + 3)^2 + (y - 2)^2 = 81$$

28. 256 ft<sup>2</sup>

29. 
$$0 = \frac{1}{3}\pi r^2 h$$

30. circumcenter; by constructing the perpendicular bisector of each side