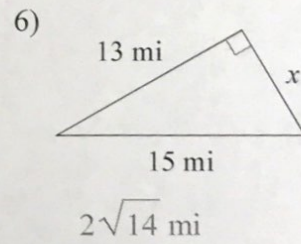
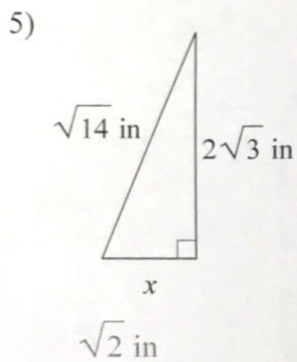
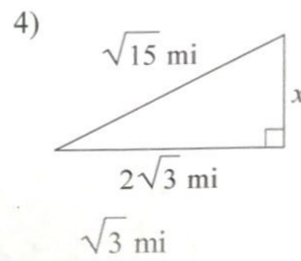
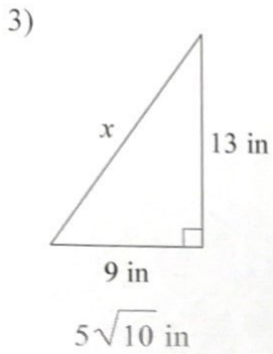
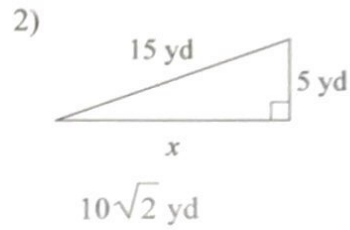
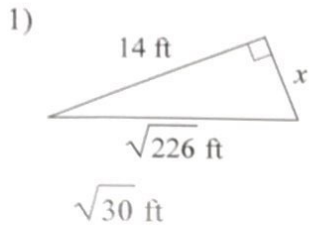


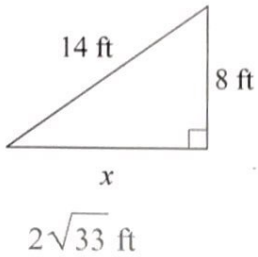
9.1-9.2 Review

Find the missing side of each triangle. Leave your answers in simplest radical form.



Find the perimeter and area

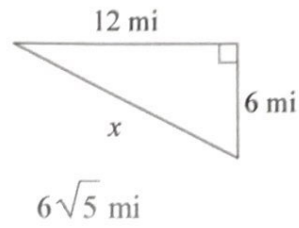
7)



$$P = 22 + 2\sqrt{33}$$

$$A = 8\sqrt{33}$$

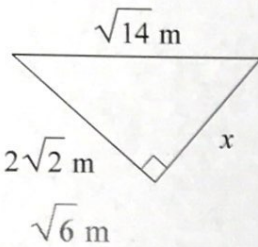
8)



$$P = 18 + 6\sqrt{5}$$

$$A = 36$$

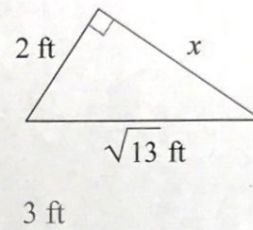
9)



$$P = \sqrt{14} + 2\sqrt{2} + \sqrt{6}$$

$$A = 2\sqrt{3}$$

10)

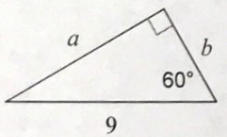


$$P = 5 + \sqrt{13}$$

$$A = 3$$

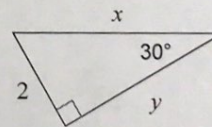
Find the missing side lengths. Leave your answers as radicals in simplest form.

11)



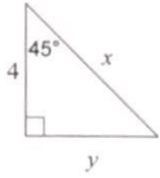
$$a = \frac{9\sqrt{3}}{2}, b = \frac{9}{2}$$

12)



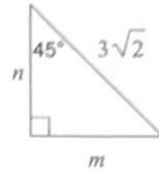
$$x = 4, y = 2\sqrt{3}$$

13)



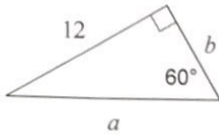
$$x = 4\sqrt{2}, y = 4$$

14)



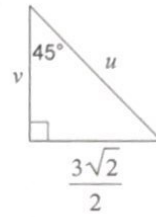
$$m = 3, n = 3$$

15)



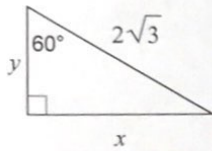
$$a = 8\sqrt{3}, b = 4\sqrt{3}$$

16)



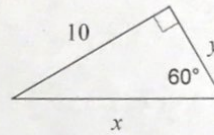
$$u = 3, v = \frac{3\sqrt{2}}{2}$$

17)



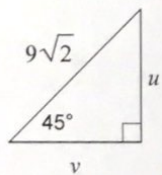
$$x = 3, y = \sqrt{3}$$

18)



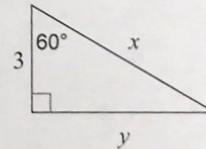
$$x = \frac{20\sqrt{3}}{3}, y = \frac{10\sqrt{3}}{3}$$

19)



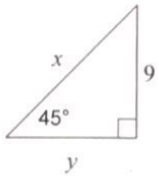
$$u = 9, v = 9$$

20)



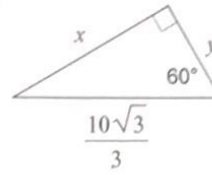
$$x = 6, y = 3\sqrt{3}$$

21)



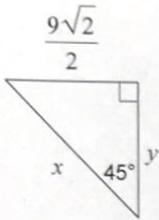
$$x = 9\sqrt{2}, y = 9$$

22)



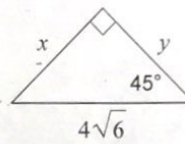
$$x = 5, y = \frac{5\sqrt{3}}{3}$$

23)



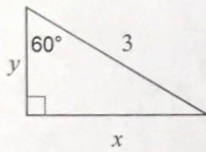
$$x = 9, y = \frac{9\sqrt{2}}{2}$$

24)



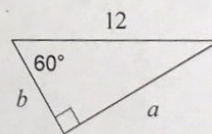
$$x = 4\sqrt{3}, y = 4\sqrt{3}$$

25)



$$x = \frac{3\sqrt{3}}{2}, y = \frac{3}{2}$$

26)



$$a = 6\sqrt{3}, b = 6$$

Quiz Review

Solve each of the following. Please draw a picture. **Be sure to label all answers and leave answers in exact simplified form.**

- 1) The bottom of a ladder must be placed 3 feet from a wall. The ladder is 12 feet long. How far above the ground does the ladder touch the wall?

$$3\sqrt{15} \text{ ft}$$

- 2) A soccer field is a rectangle 90 meters wide and 120 meters long. The coach asks players to run from one corner to the corner diagonally across the field. How far do the players run?

$$150 \text{ m}$$

- 3) How far from the base of the house do you need to place a 15' ladder so that it exactly reaches the top of a 12' wall?

$$9 \text{ ft}$$

- 4) The diagonal of a rectangle is 25 in. The width is 15 in. What is the area of the rectangle?

$$300 \text{ in}^2$$

- 5) A square has a perimeter of 28 miles. How long is each diagonal?

$$7\sqrt{2} \text{ mi}$$

6) The diagonal of a rectangle splits the rectangle into two 30-60-90 triangles. If the short leg of the triangle is 15, find the area of the triangle.

$$a = \frac{225\sqrt{3}}{2}$$

7) Find the perimeter and area of a 45-45-90 triangle with a leg of $6\sqrt{2}$ yd.

$$p = 12 + 12\sqrt{2}$$

$$a = 36$$

8) The diagonal of a rectangle splits the rectangle into two 30-60-90 triangles. If the diagonal is 18, find the area and perimeter of the rectangle.

$$p = 18 + 18\sqrt{3}$$

$$a = 81\sqrt{3}$$

9) The diagonal of a square has a length of 36. Find the area of the square.

$$a = 648$$

10) What is the length of a side of an equilateral triangle with a height of $6\sqrt{3}$ cm? (hint: draw a triangle, then draw a segment from a vertex to the opposite side, segment creates two 30-60-90 triangles)

$$12 \text{ cm}$$

11) What is the length of the hypotenuse of an isosceles right triangle with a leg length of 26 ft?

$$26\sqrt{2} \text{ ft}$$