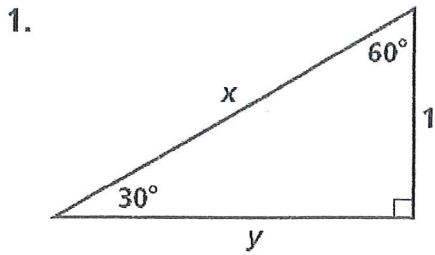


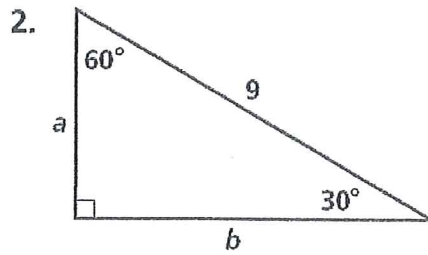
Practice Day 3 Hwk

Special Right Triangles

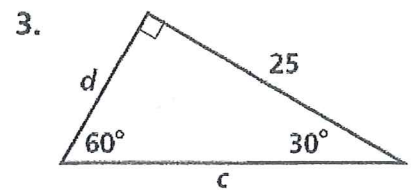
Find the value of each variable. Leave your answers in simplest radical form.



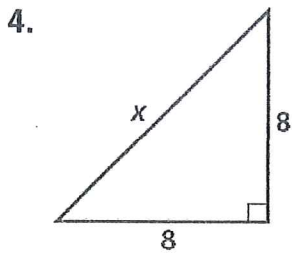
$x = 2$ $y = \sqrt{3}$



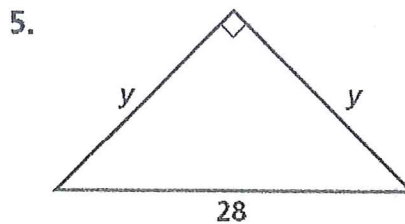
$a = 4.5$ $b = 4.5\sqrt{3}$
 or $\frac{9}{2}$ $\frac{9\sqrt{3}}{2}$



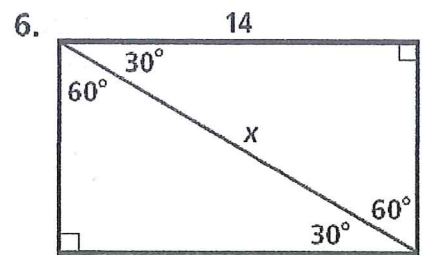
$c = \frac{50\sqrt{3}}{3}$ $d = \frac{25\sqrt{3}}{3}$



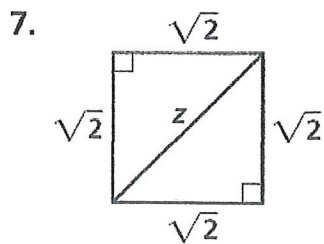
$x = 8\sqrt{2}$



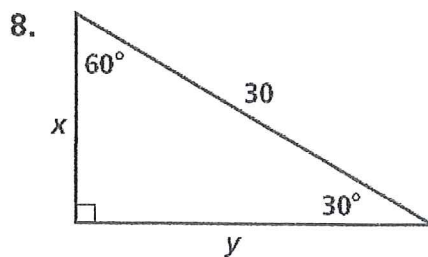
$y = 14\sqrt{2}$



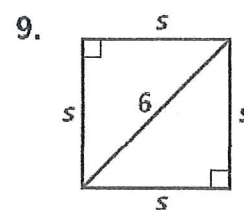
$x = \frac{28\sqrt{3}}{3}$



$z = 2$

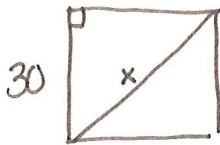


$x = 15$ $y = 15\sqrt{3}$



$s = 3\sqrt{2}$

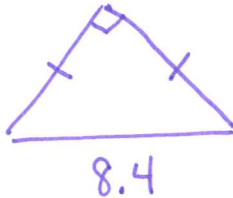
10. Find the length to the nearest centimeter of the diagonal of a square with 30 cm on a side.



$$\text{diagonal} = 30\sqrt{2}\text{cm}$$

$$\text{diagonal} \approx 42\text{cm}$$

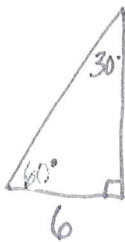
11. The hypotenuse of an isosceles right triangle is 8.4 in. find the length of a side to the nearest tenth.



$$\text{Side} = 4.2\sqrt{2}$$

$$\text{Sides} \approx 5.9\text{ inches}$$

12. In a 30°-60°-90° triangle, the shorter leg is 6 ft long. Find the length of the other two sides to the nearest tenth.

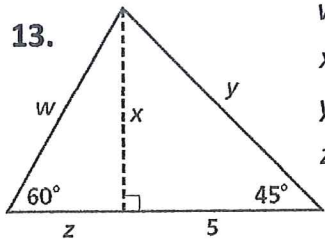


$$\text{longer leg} = 6\sqrt{3}$$

$$\text{LL} \approx 10.4\text{ft}$$

$$\text{hypotenuse} = 12\text{ft}$$

Algebra Find the value of each variable. Leave your answers in simplest radical form.

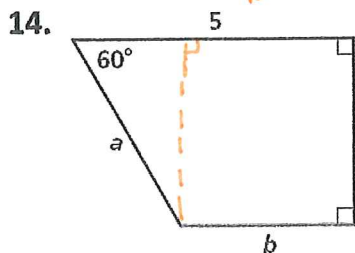


$$w = \frac{10\sqrt{3}}{3} = w$$

$$x = 5$$

$$y = 5\sqrt{2}$$

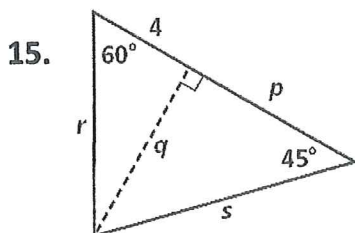
$$z = \frac{5\sqrt{3}}{3} = z$$



need a helping line

$$a = 4$$

$$b = 3$$



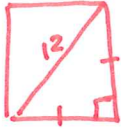
$$p = \frac{4\sqrt{3}}{3}$$

$$q = \frac{4\sqrt{3}}{3}$$

$$r = 8$$

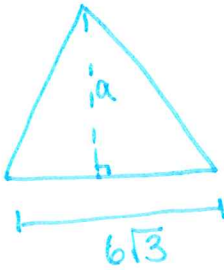
$$s = 4\sqrt{6}$$

16. The length of the diagonal of a square is 12 inches. Find the length of one side of the square.



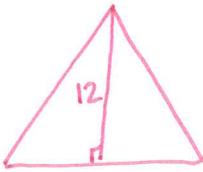
$$\text{Side} = 6\sqrt{2} \text{ inches}$$

17. The length of one side of an equilateral triangle is $6\sqrt{3}$ meters. Find the length of the altitude of the triangle.



$$\text{altitude} = 18 \text{ m}$$

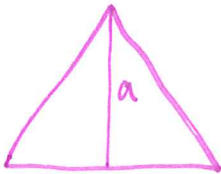
18. The length of the altitude of an equilateral triangle is 12 feet. Find the length of one side of the equilateral triangle. What is the perimeter of the equilateral triangle?



$$\begin{aligned} \text{side} &= 8\sqrt{3} \\ \text{perimeter} &= 24\sqrt{3} \text{ ft} \end{aligned}$$

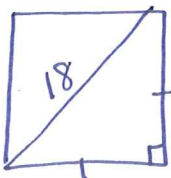
19. The perimeter of an equilateral triangle is 39 cm. Find the length of the altitude of the triangle.

$$P = 39$$



$$\text{altitude} = 6.5\sqrt{3} \text{ cm}$$

20. The length of the diagonal of a square is 18 mm. Find the perimeter of the square.



$$\text{perimeter} = 36\sqrt{2} \text{ mm}$$