

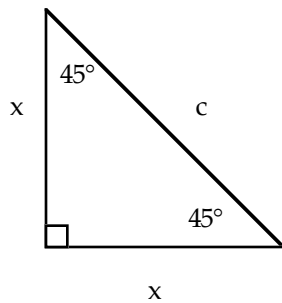
Special Triangles
Pre-Algebra 1.2

Name _____ Period _____

Square roots

I $\sqrt{ab} = \sqrt{a} \cdot \sqrt{b}$ $\sqrt{45} = \sqrt{9} \cdot \sqrt{5} = 3\sqrt{5}$

II $45^\circ - 45^\circ - 90^\circ$ right triangle



Pythagorean Theorem

$$c^2 = a^2 + b^2$$

$$c^2 = x^2 + x^2$$

$$c^2 = 2x^2$$

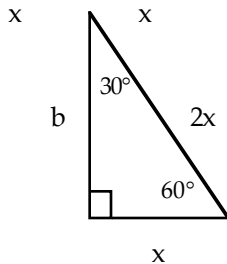
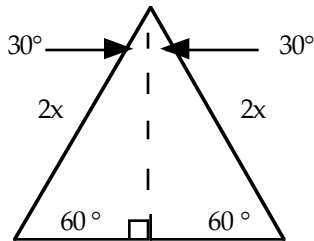
$$c = \sqrt{2x^2}$$

$$c = \sqrt{2} \cdot \sqrt{x^2}$$

$$c = \sqrt{2} \cdot x \text{ or}$$

$$c = x\sqrt{2}$$

III $30^\circ - 60^\circ - 90^\circ$ right triangle
(from equilateral triangle)



$$c^2 = a^2 + b^2$$

$$(2x)^2 = x^2 + b^2$$

$$4x^2 = x^2 + b^2$$

$$3x^2 = b^2$$

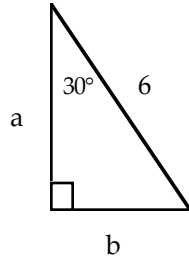
$$b = \sqrt{3x^2} = \sqrt{x^2} \cdot \sqrt{3}$$

$$b = x\sqrt{3}$$

Special Triangles
Pre- Algebra 1.2

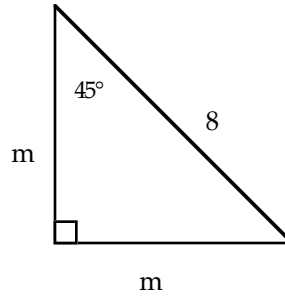
Name _____ Period _____

Problems : Find the lengths of the sides of the following triangles

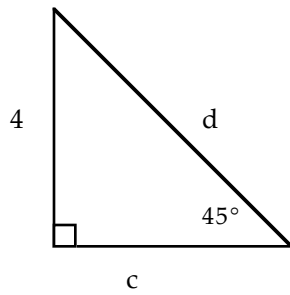


$b =$

$a =$

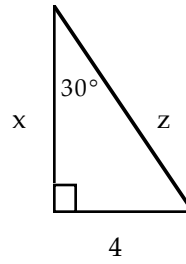


$m =$



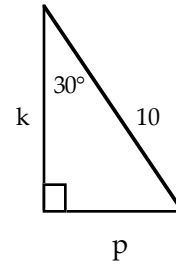
$c =$

$d =$



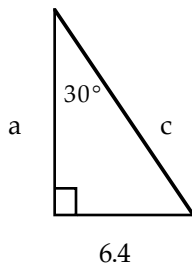
$x =$

$z =$



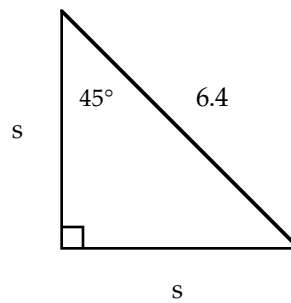
$k =$

$p =$



$a =$

$c =$



$s =$