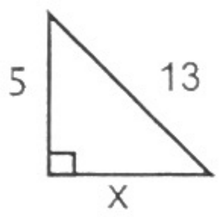
WarmUP Pythagorean Theorem, Trig Ratios, Using Trig Ratios (SOH-CAH-TOA)

Name Key

1. Use Pythagorean Theorem to solve for x

Solve for x.



$5^2 + x^2 = 13^2$

$25 + x^2 = 169$

$\sqrt{x^2} = \sqrt{144}$

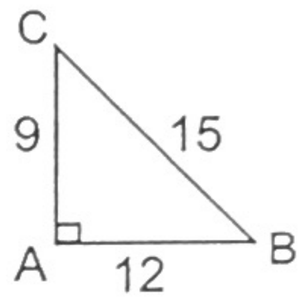
$x = 12$

2. Write the following trig ratios:

Sin C = $\frac{12}{15}$

Cos C = $\frac{9}{15}$

Tan C = $\frac{12}{9}$



3. Solve for the variables using Trig Ratios

x = 4.7

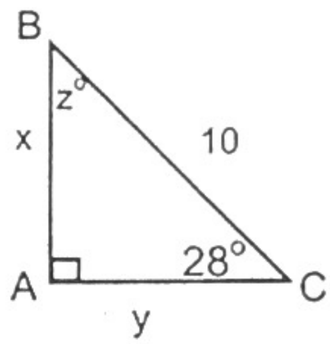
y = 8.83

z = 62°

$\cos 28 = \frac{y}{10}$

$\frac{10}{1} \cdot .8829 = \frac{y}{10} \cdot \frac{10}{1}$

$y = 8.83$



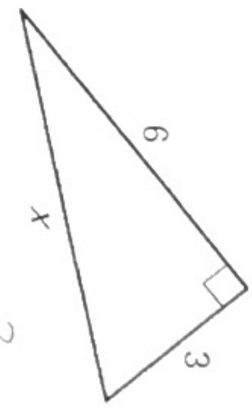
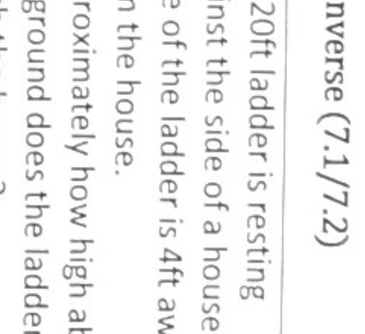
$\sin 28 = \frac{x}{10}$

$\frac{10}{1} \cdot .4695 = \frac{x}{10} \cdot \frac{10}{1}$

$x = 4.70$

Geo A - DLT Quiz **Name** Key

Pythagorean Thrm and Converse (7.1/7.2)

1.Solve. Simplify radical, if possible.  $6^2 + 3^2 = x^2$ $36 + 9 = x^2$ $\sqrt{x^2} = \sqrt{45}$ $\sqrt{9}\sqrt{5}$ $x = 3\sqrt{5}$	2.A 20ft ladder is resting against the side of a house. The base of the ladder is 4ft away from the house. Approximately how high above the ground does the ladder touch the house?  $4^2 + h^2 = 20^2$ $h = 19.60$
3.Decide whether the numbers can represent the sides of a triangle. If they can classify the triangle as acute, right, or obtuse. 10, 12, 22 $10^2 + 12^2 \square 22^2$ $100 + 144 \square 484$ $244 < 484$ obtuse	4.Decide whether the numbers can represent the sides of a triangle. If they can classify the triangle as acute, right, or obtuse. 5, 7, 9 $5^2 + 7^2 \square 9^2$ $25 + 49 \square 81$ $74 < 81$ obtuse $a^2 + b^2 < c^2$

Geo A - DLT Quiz Name Key

Radicals

1.Simplify	2.Simplify
$\sqrt{54}$ $= \sqrt{9}\sqrt{6}$ $3\sqrt{6}$	$3\sqrt{20}$ $3\sqrt{4}\sqrt{5}$ $3 \cdot 2\sqrt{5}$ $6\sqrt{5}$
3.Simplify $(2\sqrt{5})^2$ $(2\sqrt{5})(2\sqrt{5})$ $4\sqrt{25}$ $4 \cdot 5 = 20$	4.Rationalize the denominator. $\frac{6}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{6\sqrt{2}}{2}$

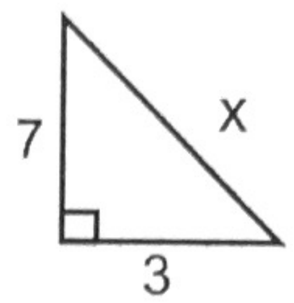
Name: Key Date: _____ Block: _____

Geometry B Daily Learning Target

Day 3 – Simplifying Square roots/Pythagorean Theorem

1.

Solve for x.



$7^2 + 3^2 = x^2$

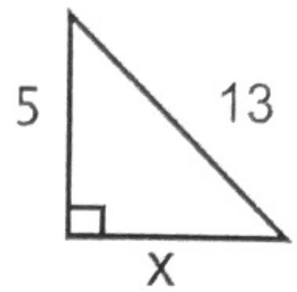
$49 + 9 = x^2$

$58 = x^2$

$x = 7.62$

2.

Solve for x.



$5^2 + x^2 = 13^2$

$25 + x^2 = 169$

$\sqrt{x^2} = \sqrt{144}$

$x = 12$

3.

Simplify. Leave in radical form.

a.) $\sqrt{45} = \sqrt{9}\sqrt{5}$
 $3\sqrt{5}$

b.) $2\sqrt{27} = 2\sqrt{9}\sqrt{3}$
 $2 \cdot 3\sqrt{3}$
 $6\sqrt{3}$

c.) $(3\sqrt{20})^2$

$(3\sqrt{20})(3\sqrt{20}) = 9\sqrt{400}$

$= 9 \cdot 20$

$= 180$

4.

Tell whether the triangle with sides

7, 8, 10

Is Right, Acute, or Obtuse (show work)

$7^2 + 8^2 \square 10^2$

$49 + 64 \square 100$

$113 > 100$

Acute

Name: Key Date: _____ Block: ____

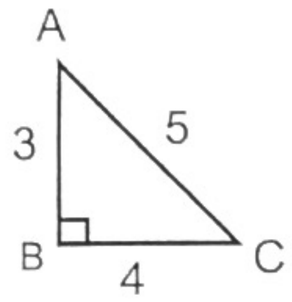
Geometry B Daily Learning Targets

Day 4 Trigonometric Ratios – Sine, Cosine, Tangent

1.

List the 3 trig ratios.

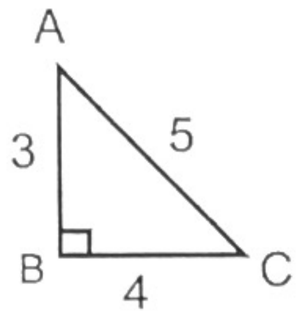
Sin A = $\frac{4}{5}$
Cos A = $\frac{3}{5}$
Tan A = $\frac{4}{3}$



2.

List the 3 trig ratios.

Sin C = $\frac{3}{5}$
Cos C = $\frac{4}{5}$
Tan C = $\frac{3}{4}$



3.

Evaluate the following. Round to two decimal places.

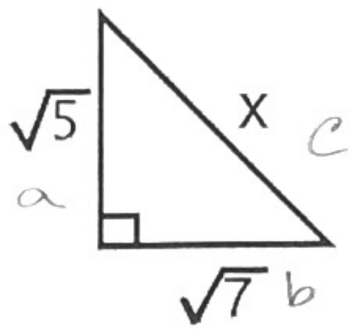
a.) sin 56^0 = .83

b.) tan 82^0 = 7.12

c.) cos 15^0 = .966

4.

Solve for x.



$(\sqrt{5})^2 + (\sqrt{7})^2 = x^2$

$5 + 7 = x^2$

$\sqrt{x^2} = \sqrt{12}$ $x = 2\sqrt{3}$

Name: Key Date: _____ Block: ____

Geometry Daily Learning Targets

Day 5 – Solving for Side Lengths using Trig

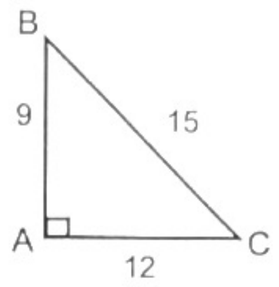
1.

List the trig ratios. Simplify.

Sin C = $\frac{9}{15}$

Cos C = $\frac{12}{15}$

Tan C = $\frac{9}{12}$



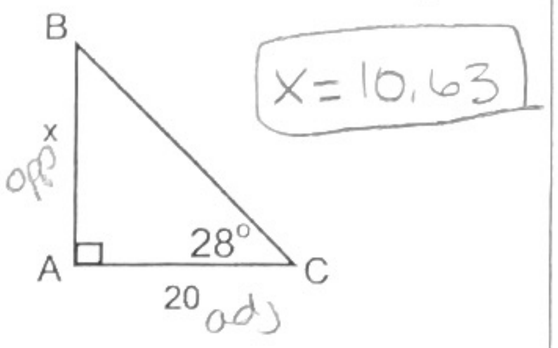
2.

Solve for x.

$\tan 28 = \frac{x}{20}$

$20 \cdot .5317 = \frac{x}{20} \cdot 20$

$x = 10.63$



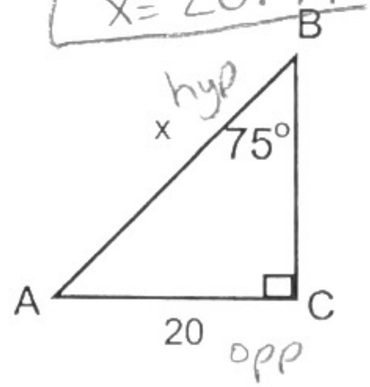
3.

Solve for the variable.

$\sin 75 = \frac{20}{x}$

$.9659 = \frac{20}{x}$

$x = 20.71$



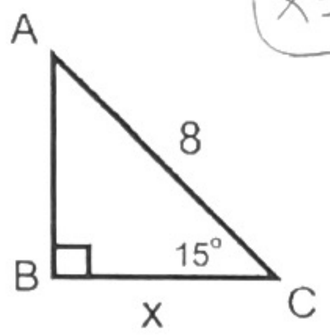
4.

Solve for the variable.

$\cos 15 = \frac{x}{8}$

$.9659 = \frac{x}{8}$

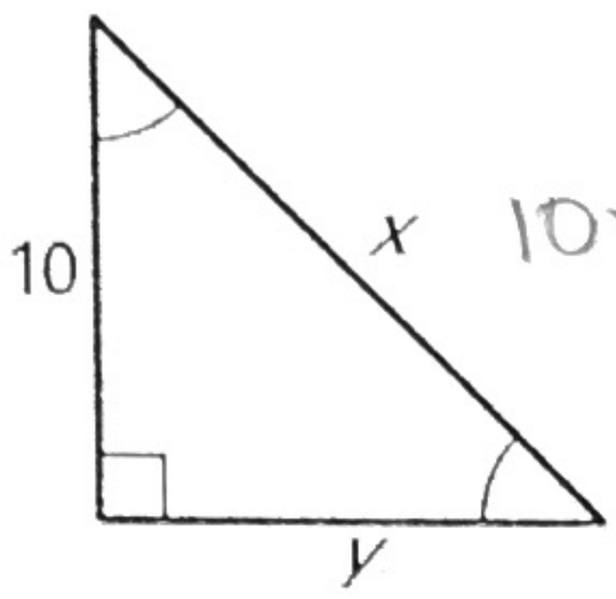
$x = 7.73$



Geo A - DLT Quiz Name Key

Special Right Triangles (7.4)

1.Find the value of x and y. Write your answer in simplest radical form.

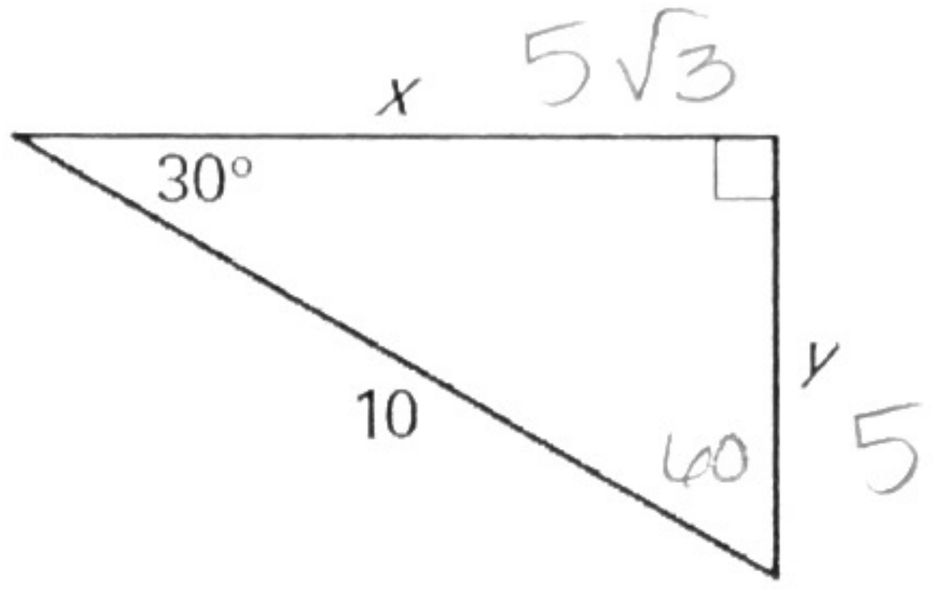


$10\sqrt{2}$

10

45.45.90 triangle

2.Find the value of x and y. Write your answer in simplest radical form.

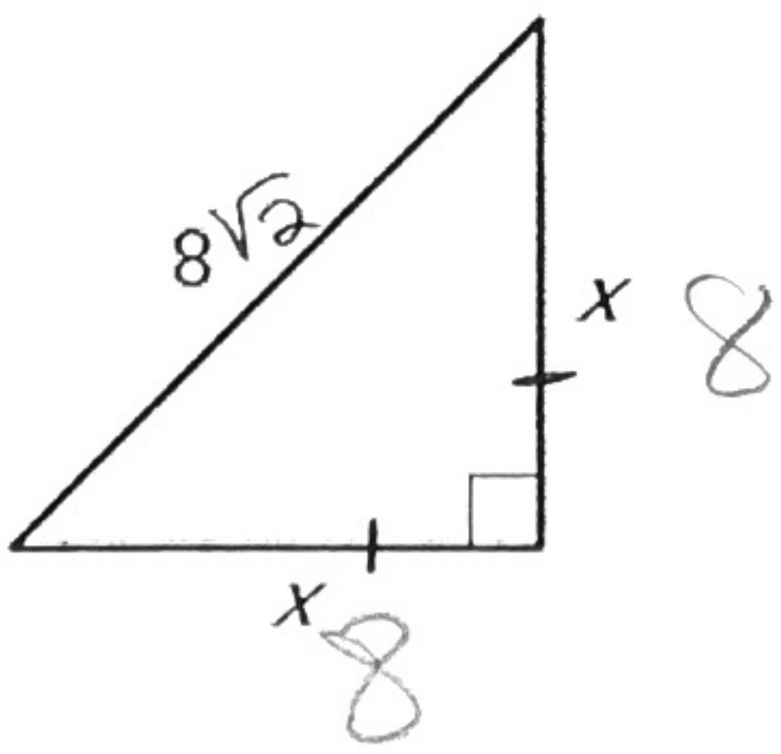


$5\sqrt{3}$

5

30.60.90 triangle

3.Find the value of x. Write your answer in simplest radical form.

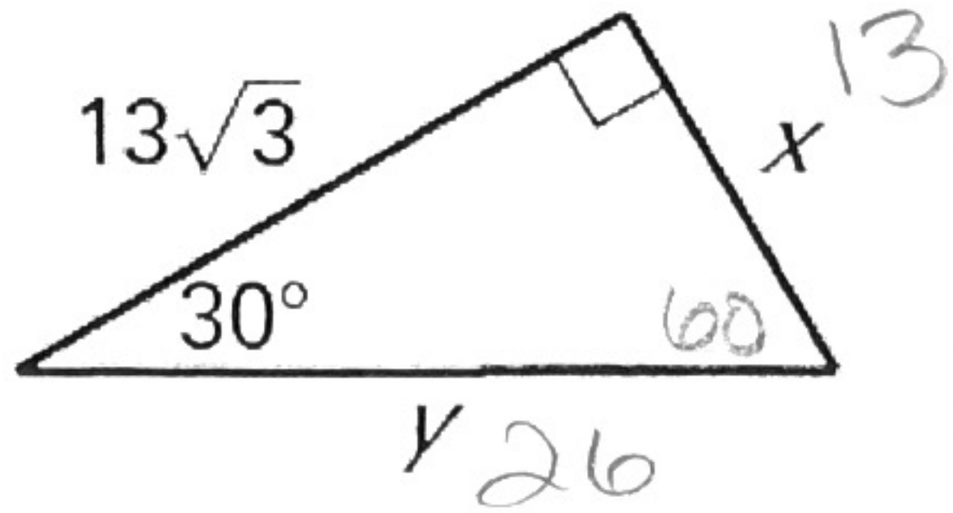


8

8

45.45.90 triangle

4.Find the value of x and y. Write your answer in simplest radical form.



13

26

30.60.90 triangle