Geometry G – Block Key

5.7 HOMEWORK!!! ☺

Objective #1: Simplify the radicals (aka NO decimals)

1) $\sqrt{144}$ 12

2) $3\sqrt{225}$ $3\cdot15$ 45

3) $2\sqrt{3}*5$ $10\sqrt{3}$

4) $\frac{5}{\sqrt{3}}\cdot\frac{\sqrt{3}}{\sqrt{3}}$ $\frac{5\sqrt{3}}{\sqrt{9}}=\frac{5\sqrt{3}}{3}$

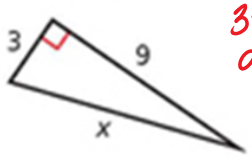
5) $\frac{3}{\sqrt{2}}\cdot\frac{\sqrt{2}}{\sqrt{2}}$ $\frac{3\sqrt{2}}{\sqrt{4}}$ $\frac{3\sqrt{2}}{2}$

6) $\sqrt{\frac{5}{3}}$ $\frac{\sqrt{5}}{\sqrt{3}}\cdot\frac{\sqrt{3}}{\sqrt{3}}$ $\frac{\sqrt{15}}{\sqrt{9}}=\frac{\sqrt{15}}{3}$

Objective #2:

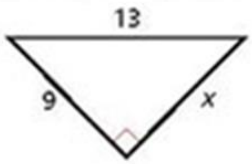
Find the value of x. Give your answer in simplest radical form. (aka NO Decimals!) Identify if any triple

7)



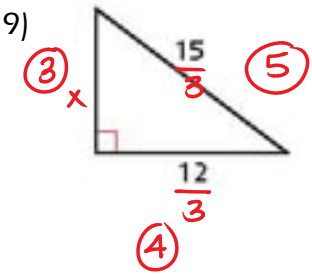
$3^2+9^2=x^2$
$9+81=x^2$
$\sqrt{90}=\sqrt{x^2}$
$9\cdot10$
$3\cdot3\cdot2\cdot5$
$3\sqrt{10}=x$

8)



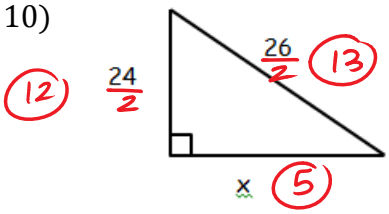
$x^2+9^2=13^2$
$x^2+81=169$
$\sqrt{x^2}=\sqrt{88}$
$8\cdot11$
$2\cdot4$
$2\cdot2$
$x=2\sqrt{22}$

9)



x=9

10)



X=10

Objective #3: Tell if the measures can be side lengths of a triangle. If so, classify the triangle as acute, obtuse, or right.

11) 6, 8, 10

$6+8>10$ yes
6^2+8^2 10^2
$36+64$ 100
$100=100$ right Δ

12) 5, 12, 17

$5+12>17$
NO
not a Δ

13) 2, 3, 4

$2+3>4$ yes
2^2+3^2 4^2
$4+9$ 16
$13>16$ obtuse

14) Katie found a cat stuck in a tree ☹. In order to help it down, she went to get a 13 foot ladder. If it reached 12 feet up the tree, how far did Katie place the ladder from the base of the tree?

x = 5 feet