

LESSON PLANS

DATE: 1/28/14

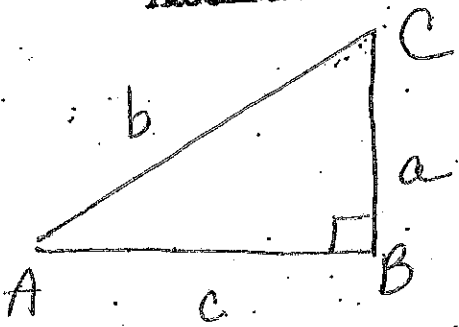
SUBJECT: PreCalc

TOPIC: "Pre" Sec-1

OBJECTIVES:

Students are able to solve right triangles using trig. ratio and are able to use 45-45-90 and 30-60-90 Δ rules to solve special right Δ 's.

PROCEDURE:



$$\sin A = \frac{a}{b}$$

$$\cos A = \frac{c}{b}$$

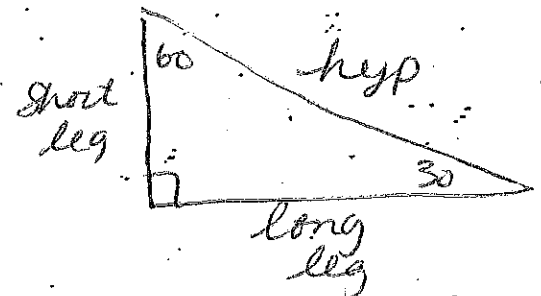
$$\tan A = \frac{a}{c}$$

$$\csc A = \frac{b}{a}$$

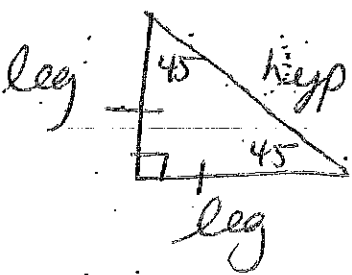
$$\sec A = \frac{b}{c}$$

$$\cot A = \frac{c}{a}$$

30-60-90 Δ

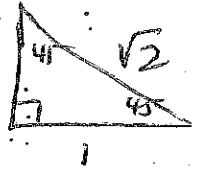


Special right Δ 's
45-45-90 (ISOSCELES Rt Δ)



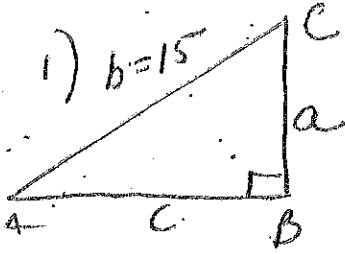
$$\text{leg} \times \sqrt{2} = \text{HYP}$$

$$\text{HYP} \div \sqrt{2} = \text{leg}$$



Short leg $\times 2 = \text{hyp}$
 $\text{hyp} \div 2 = \text{short leg}$
 Short leg $\times \sqrt{3} = \text{long leg}$
 $\text{long leg} \div \sqrt{3} = \text{short leg}$

EXAMPLES:

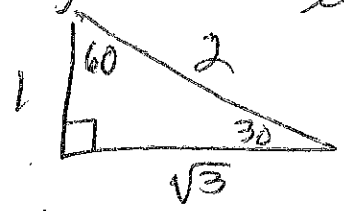


$\sec A = \frac{3}{2}$, $b=15$, FIND c

$$\sec A = \frac{b}{c} = \frac{15}{c}$$

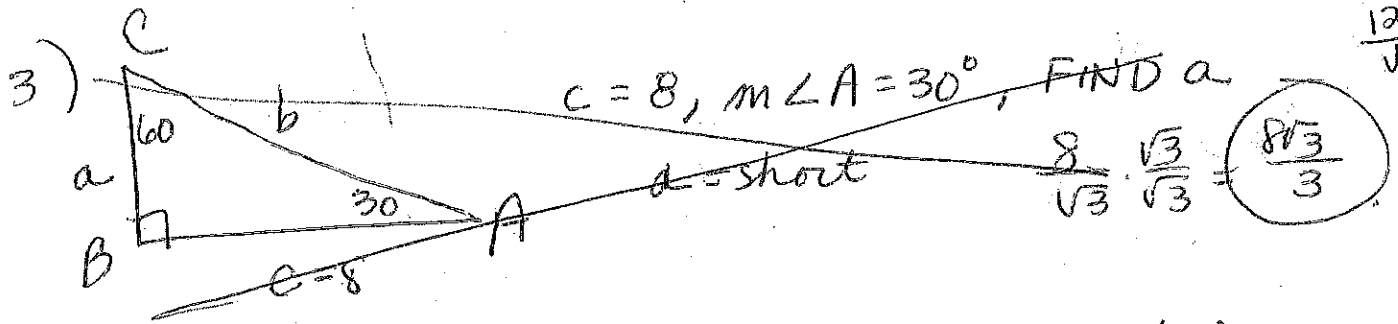
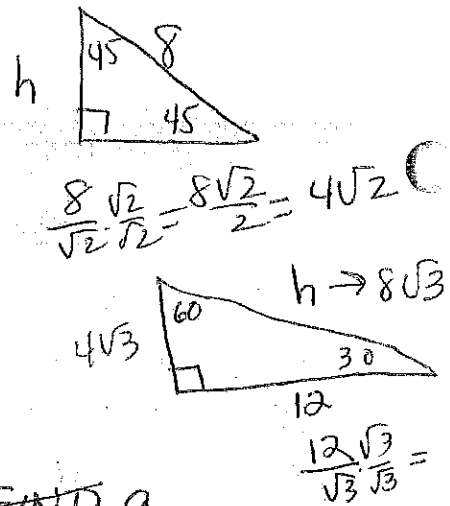
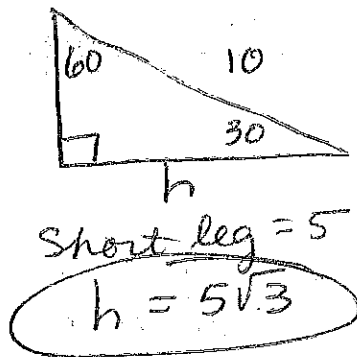
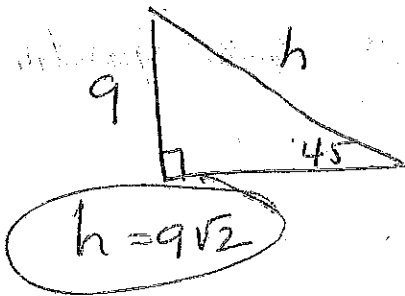
$$\frac{3}{2} = \frac{15}{c}$$

$c = 10$

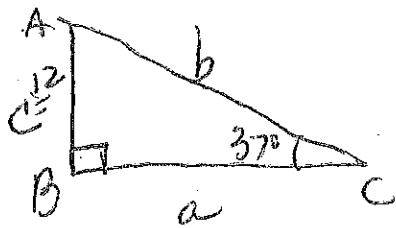


ASSIGNMENT:

2) FIND h as an exact value



4) SOLVE the Δ



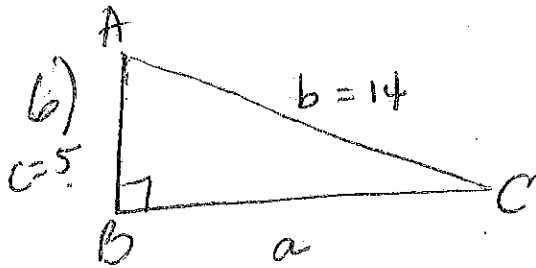
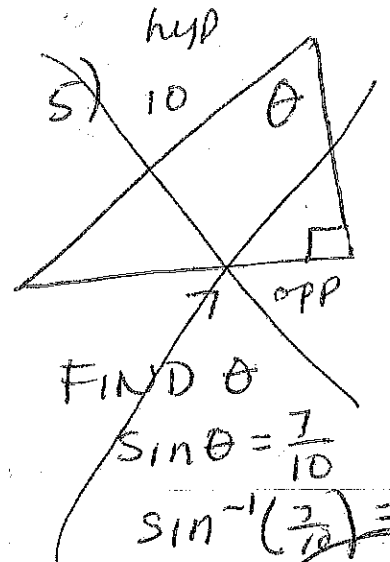
$\angle A = 53^\circ$

$\sin 37 = \frac{12}{b}$

$b = 19.94$

$\tan 37 = \frac{12}{a}$

$a = 15.92$



FIND $\angle A, \angle C$

$\sin C = \frac{5}{14}$

$\cos A = \frac{5}{14}$

$\angle C = 20.9^\circ$

$\angle A = 69.1^\circ$

HW

WS. 1-16,

17-23 odd

25-28,

29-35 odd