

Honors Trigonometry

Name _____

Copy original problem.

Per _____

Date _____

Convince *me* that **you** understand the concept!

Chapter 5 Exam

I

For each of the following, find all missing parts. Use 3-place decimals and don't round early! Angles are to accurate to the nearest minute. (Hint: all triangles exist) (15 pts ea)

A) $a = 10$
 $b = 15$
 $c = 20$

B) $b = 12$
 $c = 20$
 $A = 30^\circ$

C) $A = 38^\circ$
 $C = 25^\circ$
 $c = 15$

D) $b = 7$
 $a = 9$
 $B = 35^\circ$

E) $a = 5$
 $b = 4$
 $c = 3$

II

Solve $\forall \theta \in 0^\circ \leq \theta < 360^\circ$

(15 pts)

$$\sin \theta + \cos \theta - 1 = 0$$

III

Given $0^\circ \leq \theta < 90^\circ$, and $\tan^2 \theta = \frac{2}{3}$. Find the *exact* value of $\sin(\theta - 90^\circ)$ (ie. no decimals) (10 pts)**Extra Credit** ----- **5 pts** -----Find the *exact* area of the triangle with sides of: $\sqrt{5}$, $\sqrt{11}$, and 4. Explain.