

SLU PreCalculus TEST 3 Sections 6.2 – 6.5, 7.1, 7.2 Spring 2007

NAME: _____ Score _____/100
Please print

SHOW ALL YOUR WORK IN A NEAT AND ORGANIZED FASHION

You may use a calculator, but anytime you use the calculator your work must make it very clear to me what you did to arrive at your answer.

Each questions is worth 10 points.

1. Find the exact value of $\sin(105^\circ)$. A calculator should not be used.

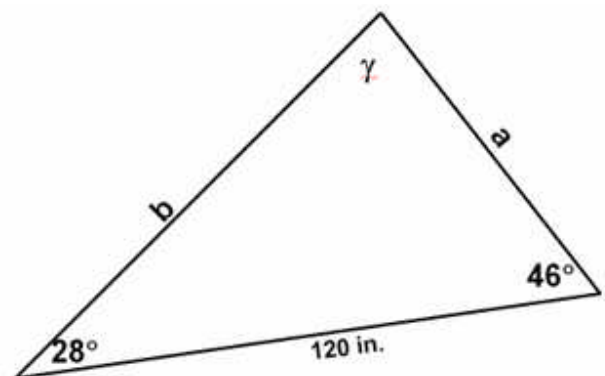
2. Prove/Verify $\sin(x - 45^\circ) = \frac{\sin x - \cos x}{\sqrt{2}}$

3. Find all exact solutions in $[0, 2\pi]$ for the equation $2\cos^2(x) - \cos(x) = 0$. A calculator should not be used.

4. Find ALL solutions of the equation $\sqrt{2} \sin(x) - 1 = 0$. A calculator should not be used.

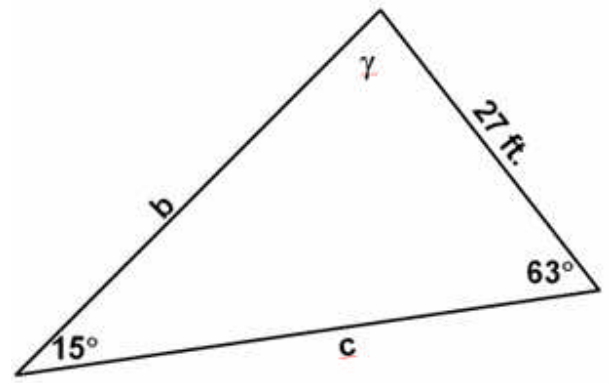
5. Use a calculator to find a solution of $5.0118\sin(x) - 3.1105 = 0$ in Quadrant II

6. Solve Triangle 1.



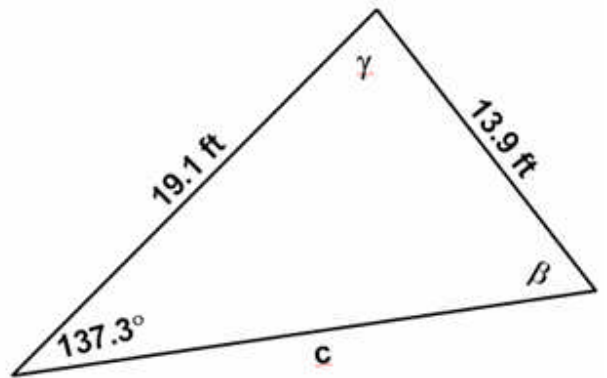
Triangle 1

7. Solve Triangle 2.



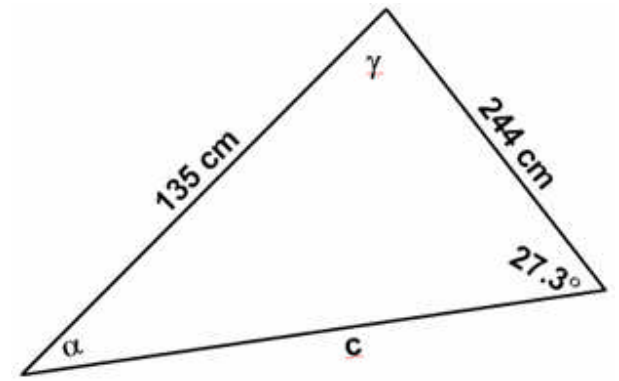
Triangle 2

8. Solve Triangle 3.



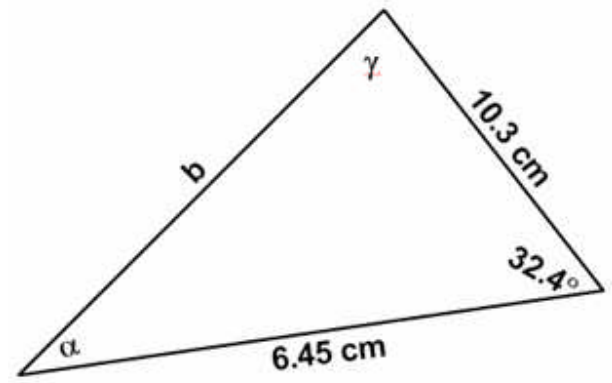
Triangle 3

9. Solve Triangle 4.



Triangle 4

10. Solve Triangle 5



Triangle 5