Fifth Quiz

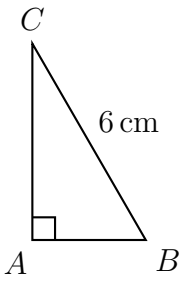
April 4, 2011

1. Given that $B = 60°$, solve the following triangle:

$A = 90°$ $\quad a = 6$ cm

$B = 60°$ $\quad b =$

$C =$ $\quad c =$

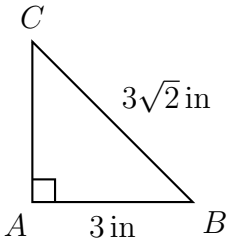


2. Solve the following triangle:

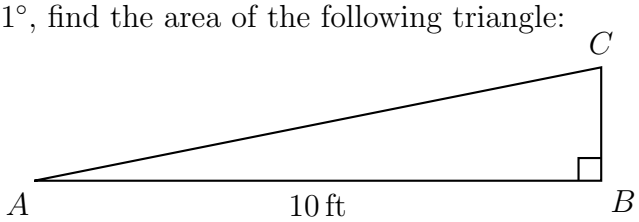
$A = 90°$ $\quad a = 3\sqrt{2}$ in

$B =$ $\quad b =$

$C =$ $\quad c = 3$ in



3. Given that $A = 11.31°$, find the area of the following triangle:



4. The angle of elevation of a building, measured 200 feet from its base is 14.04°. What's the height of the building?

5. A boat is observed from the top of a lighthouse, 250 feet above sea level. If the boat is 2500 feet away what's the angle of depression?

6. Find the exact value of the expression $\dfrac{\sin 60°}{\cos 60° + \sin 45°}$. Simplify your answer as much as possible.

7. A point P is at distance 5 from the origin and the reference angle is 220°. Find the coordinates of P.

8. An angle θ has $\tan\theta = -0.4663$.
   (a) Based on this information in which quadrants can the terminal point of θ lie?
   (b) Find all possible such angles θ, with

$$0° \leq \theta < 360°$$

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9. Find the angle of reference θ of the point $P(4, -5)$. Your answer should be in the range $0° \leq \theta < 360°$.

10. Find the length of the arc α, where the corner of the angle is at the center of the circle. Give an exact answer.