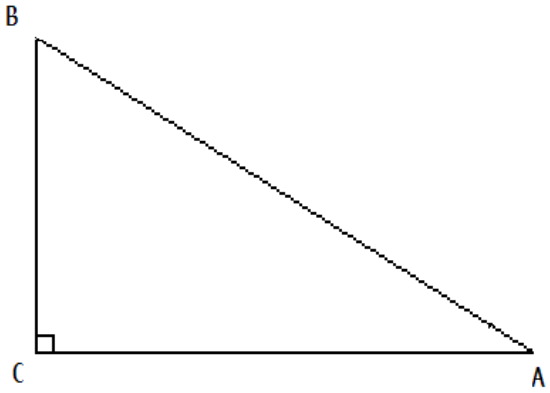
Name: _____

Math 32, Spring 2010, Section 101
Quiz 7

(1) (3 pts) In the triangle below, $\angle B = 60\,^\circ$. If $AC = 16$cm, find BC and AB.



(2) (4 pts) Assume that the population of a bacteria colony grows exponentially (i.e. according to the law $N(t) = N_0 e^{kt}$.) At the start of an experiment, 2000 bacteria are present in a colony. Two hours later, the population is 3800.
(a) Determine the constants N_0 and k in the model.
(b) When will the population reach 10000?

(3) (3 pts) Find the values of $\cos\theta$, $\tan\theta$ and $\csc\theta$ given that $\sin\theta = 3/4$ and that θ is acute. Rationalize the denominator of any fractions.