name:	Section time:

Problem set/Quiz 1--due Thursday, Jan 25 (all other quizzes will be in-class)

1. Crop yield for a farm is usually measured in yield per acre. The normal distribution can be used to characterize crop yields over time (Am. J. Ag. Econ. May 1999) Historical data indicate that next summer's cotton yield for a particular Georgia farmer is predicted by a normal distribution with mean 1500 lb. per acre and standard deviation 250. The farm will be profitable if the yields are at least 1600 lb. per acre. What's the probability the farm will make money next summer?

A. Virtually certain
B. can't tell from the data
C. 0.16
D. 0.4
E. 0.34
F. 1.07

2.Suppose a population is composed of 60% males and 40% females. 20% have blue eyes and 80% have brown eyes. If these two characteristics are independent, what is the probability an individual selected at random from this population is a blue-eyed female?

A. 60%
B. 8%
C. 30%
D. 50%
E. 20%

3.A random sample of n=64 observations is drawn from a population with mean = 20 and standard deviation = 16. The population has a distribution skewed to the high side. If you repeated this sampling procedure a large number of times, what is the expected mean, standard deviation and shape of the distribution of the sample Xbar's?

A. 20,16, skewed
B. 20,4, skewed
C. 20, 2, skewed
D. 20, 16, normal
E. 20, 2, normal
F. 20, 0.25, normal

4.A population is normally distributed with a mean = 100 and standard deviation = 10. what is the approximate probability of picking a value at random that is 105 or less?

A. 69%
B. 38%
C. 31%
D. virtually 100%
E. essentially zero

5.A population is normally distributed with a mean = 100 and standard deviation= 10. what is the approximate probability of picking a sample of n=25 at random that has a mean of 105 or less?

A. less than 1%
B. greater than 99%
C. 38%
D. 69%
E. 31%

6. If the Formula, =A1*$B1, in cell A2 is copied to cell B3 in EXCEL, what formula would result in the target cell B3?

A. =A1*$B1
B. =B1*$C1
C. =B2*$B1
D. =B2*$B2
E. =B2*$C2

	A	B	C	D
1				
2	=A1*$B1			
3				
4				