

Please answer all questions

1	2	3	4	5	6	7
8	9	10				

Answer Grid:

Multiple Choice Questions (use the answer grid).

1. The mean of any uniform probability distribution is
 - (a) $\frac{b-a}{2}$
 - (b) $\frac{a+b}{2}$
 - (c) $\frac{\sum X}{n}$
 - (d) $n\Pi$
2. The total area under a normal probability distribution is
 - (a) between -3.0 and 3.0.
 - (b) 1.00.
 - (c) dependent on a value of 'z'.
 - (d) approximated by the binomial distribution.
3. A random variable from an experiment where outcomes are normally distributed can have
 - (a) any value between $-\infty$ and ∞
 - (b) only a few discrete values
 - (c) a mean of 0 and a standard deviation of 1
 - (d) no values
4. What is an important similarity between the uniform and normal probability distributions?
 - (a) The mean, median and mode are all equal.
 - (b) The mean and median are equal.
 - (c) They are negatively skewed.
 - (d) About 68% of all observations are within one standard deviation of the mean.
5. The mean of a normally distributed group of weekly incomes of a large group of executives is \$1,000 and the standard deviation is \$100. What is the z-score (standardized normal) for an income of \$1,100?
 - (a) 1.00
 - (b) 2.00
 - (c) 1.6
 - (d) -.9
6. Two normal distributions are compared. One has a mean of 10 and a standard deviation of 10. The second normal distribution has a mean of 10 and a standard deviation of 2. Which of the following is true?
 - (a) The locations of the distributions are different.
 - (b) The distributions are from two different families.
 - (c) The dispersions of the distributions are different.
 - (d) The dispersions of the distributions are the same.
7. Tables of normal distribution probabilities are found in many statistics books. These probabilities are calculated from a normal distribution with
 - (a) a mean of 1 and a standard deviation of 1.
 - (b) a mean of 100 and a standard deviation of 15.
 - (c) a mean of 0 and a standard deviation of 15.
 - (d) a mean of 0 and a standard deviation of 1.

Quiz 3**QUME 232**

8. Two competitive brothers, who work in two different industries, were comparing their salaries. Because there is a difference of 4 years in their respective work experience, they decided to compare, not their actual salaries, but to compare their salaries against their company averages to see who is doing better. The following gives the brothers salaries, companies mean, and standard deviation for each company.
- (a) -1.29 (c) -1.89
(b) 1.29 (d) 1.89
9. For the normal distribution, the mean plus and minus 1.96 standard deviations will include about what percent of the observations?
- (a) 50% (b) 99% (c) 95% (d) 68%

Brother	Salary	μ	σ
Tom	84,000	75,000	7000
Andy	75,500	60,000	8200

Table 1: Salaries

What is the z-score (standardized normal) of Andy's salary?

10. The shape of any uniform probability distribution is
- (a) Negatively skewed
(b) Positively skewed
(c) Rectangular
(d) Bell shaped