1. If \( n = 10 \) and \( p = 0.60 \), then the mean of the binomial distribution is:
   a. 0.06  
   b. 2.65  
   c. 6.00  
   d. 5.76

2. If \( n = 20 \) and \( p = 0.70 \), then the standard deviation of the binomial distribution is:
   a. 0.14  
   b. 2.05  
   c. 14.0  
   d. 14.7

3. Suppose that a judge's decision follow a binomial distribution and that his verdict is correct 90% of the time. In his next 10 decisions, what is the probability that he makes fewer than 2 incorrect verdicts?
   Enter your answer to at least three decimal places.
   __________

4. If \( X \) has a binomial distribution with \( n = 4 \) and \( p = 0.3 \), then \( P(X > 1) = \) __________
   Enter your answer to at least four decimal places.

5. Given that \( Z \) is a standard normal random variable, \( P(-1.0 \leq Z \leq 1.5) \) is:
   a. 0.7745  
   b. 0.8413  
   c. 0.0919  
   d. 0.9332

6. Given that \( Z \) is a standard normal variable, the value \( z \) for which \( P(Z \leq z) = 0.2580 \) is:
   a. 0.70  
   b. 0.758  
   c. -0.65  
   d. 0.242

7. A standard normal distribution is a normal distribution with:
   a. a mean of zero and a standard deviation of one.  
   b. a mean of one and a standard deviation of zero.  
   c. a mean usually larger than the standard deviation.  
   d. a mean always larger than the standard deviation.

8. If \( Z \) is a standard normal random variable, then the value \( z \) for which \( P(-z \leq Z \leq z) = 0.8764 \) is:
   a. 0.3764  
   b. 1.54  
   c. 3.08  
   d. 1.16

9. A larger standard deviation of a normal distribution indicates that the distribution becomes:
   a. narrower and more peaked.  
   b. flatter and wider.  
   c. more skewed to the right.  
   d. more skewed to the left.
If $Z$ is a standard normal random variable, find the following probabilities:

Enter your answer to four decimal places.

a. $P(Z \leq 2.33) = \quad$ ?

b. $P(Z \geq 1.65) = \quad$ ?

c. $P(-0.58 \leq Z \leq 1.58) = \quad$ ?

d. $P(Z \leq -2.27) = \quad$ ?

Suppose $Z$ has a standard normal distribution. Then 28.1% of the possible $Z$ values are smaller than \quad ?

Enter your answer to two decimal places.
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<th>2. b</th>
<th>3. 0.736</th>
<th>4. 0.3483</th>
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<th>6. c</th>
<th>7. a</th>
<th>8. b</th>
<th>9. b</th>
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