Week 6 Assignment 6

Due on 02/16/11, 2010-07

Week 6

1. For any group of multiplicative integers that the values of Z₆ mod 16.

   A: 2, 7
   B: 3, 5
   C: 1, 5
   D: 1, 7

2. Which of the following is true about the probability of an event E?

   A. If the probability of event A is greater than 0.5, then the event A occurs with a probability greater than 0.5.
   B. If the event B occurs with a probability greater than 0.5, then the event B occurs with a probability greater than 0.5.
   C. If the probability of event A occurs with a probability greater than 0.5, then the event A occurs with a probability greater than 0.5.
   D. If the probability of event B occurs with a probability greater than 0.5, then the event B occurs with a probability greater than 0.5.

3. Consider the group of integers Z₁₀ under the operation of addition.

   A. {0, 1, 2, 3, 4, 5, 6, 7, 8, 9}
   B. {0, 1, 3, 4, 5, 7, 9}
   C. {0, 1, 2, 3, 4, 5, 6, 7, 8, 9}
   D. {1, 2, 3, 4, 5, 6, 7, 8, 9}

4. If a = 3 and b = 5, then which of the following statements is true?

   A. a + b = 8
   B. a * b = 15
   C. a - b = 2
   D. a / b = 0.6

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   A. a + b = 8
   B. a * b = 15
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   D. a / b = 0.6

6. Consider the group G = {a, b, c, d} under the operation of addition mod 5.

   A. (a + b) + c = a + (b + c)
   B. a + (b + c) = (a + b) + c
   C. a + b = b + a
   D. a * b = b * a

7. Which of the following is true about the linear equation y = mx + b?

   A. The slope m is always positive.
   B. The y-intercept b is always positive.
   C. The equation represents a straight line.
   D. The equation represents a circle.

8. Consider the group G = {a, b, c, d} under the operation of multiplication.

   A. (a * b) * c = a * (b * c)
   B. a * (b * c) = (a * b) * c
   C. a * b = b * a
   D. a * b = a + b

9. Which of the following is true about the group G = {a, b, c, d} under the operation of addition mod 5?

   A. The group is abelian.
   B. The group is cyclic.
   C. The group is finite.
   D. The group is infinite.

10. Consider the group G = {a, b, c, d} under the operation of addition mod 5.

    A. The operation is associative.
    B. The operation is commutative.
    C. The operation is distributive over addition.
    D. The operation is distributive over multiplication.

11. Which of the following is true about the group G = {a, b, c, d} under the operation of addition mod 5?

    A. The operation is associative.
    B. The operation is commutative.
    C. The operation is distributive over addition.
    D. The operation is distributive over multiplication.