

Hour-Exam on Friday, July 26

- Covers material in Chapters 4, 5, and 6
- Bring #2 pencil and picture ID.
- You may use a calculator.
- You may NOT use cell phones or other wireless devices.
- You may NOT use books or notes.
- There will be room on the exam paper for calculations.

1. A pair of fair dice are rolled. What is the probability that the sum of the values on the dice is six?

A) $\frac{1}{6}$ B) $\frac{1}{9}$ C) $\frac{1}{11}$ D) $\frac{5}{36}$

2. In a poll of 1689 voters, 61% said they favored increased funding for Pell grants. Find a 95% confidence interval for the true population proportion.

A) 59.0% to 63.0%

B) 58.2% to 63.8%

C) 58.6% to 63.4%

D) 59.8% to 62.2%

3. The exam scores of thirteen students are listed below:

34, 65, 78, 76, 92, 81, 54, 78, 72, 85, 43, 90, 82

Find the five-number summary for these data.

A) 34, 65, 78, 82, 92

B) 34, 59.5, 78, 83.5, 92

C) 34, 54, 77, 82, 92

D) 34, 59.5, 77, 83.5, 92

4. A game involves tossing three coins. You win \$1 for one head, \$2 for two heads, and \$3 for three heads, but lose \$10 if the toss results in three tails. What are your expected winnings?

A) \$0.25 B) \$0 C) – \$0.50 D) – \$1

5. A card is drawn at random from a standard 52-card deck. Find the probability that the card is a spade or a queen.

A) $17/52$ B) $4/13$ C) $7/26$ D) $1/52$

6. A card is drawn at random from a standard 52-card deck. Find the probability that the card is neither a spade nor a queen.

A) $51/52$ B) $9/13$ C) $4/13$ D) $35/52$

7. A flashlight manufacturer sets aside a production line for the assembly of 2000 flashlights to fill a special order. Ninety of these flashlights are selected at random from the production line to be tested, and 15 are found to be defective. The population is

- A) the 15 defective flashlights.
- B) the 90 flashlights tested.
- C) the 2000 flashlights produced for this order.
- D) all flashlights produced by the manufacturer

8. Find the standard deviation for the following data:

2, 3, 5, 6, 7, 13

A) 7.6 B) 5.7 C) 3.6 D) 3.9

9. You are interested in knowing whether customers who use web-based technical support for your company's product are satisfied with the help they get. At the end of each support session, a customer satisfaction poll is made available to each customer. This study involves

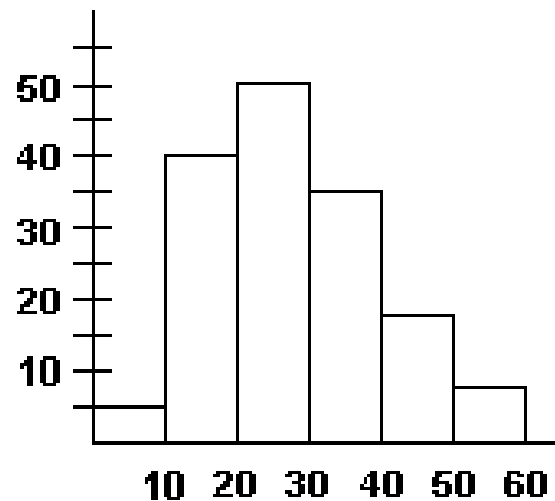
- A) participation bias. B) selection bias.
C) participation and selection bias. D) no bias.

10. A study finds that the heights of adult American women are normally distributed with a mean of 63.5 inches and a standard deviation of 2.5 inches. What percentage of adult American women are taller than 68.5 inches?

- A) 2.5% B) 5% C) 16% D) 47.5%

11. The distribution given by the histogram below is

- A) unimodal and symmetric.
- B) bimodal and skewed to the left.
- C) unimodal and skewed to the right.
- D) unimodal and skewed to the left.



12. Two marbles are drawn without replacement from a box with 5 white, 2 red, and 4 blue marbles. Find the probability that the first marble is red and the second is blue.

A) $\frac{6}{11}$ B) $\frac{8}{121}$ C) $\frac{3}{55}$ D) $\frac{4}{55}$

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