

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Express the indicated degree of likelihood as a probability value.

- 1) "It will definitely turn dark tonight."

A) 0.30

B) 1

C) 0.5

D) 0.67

1) _____

Answer the question.

- 2) Which of the following cannot be a probability?

A) $\frac{2}{3}$

B) $\frac{5}{3}$

C) $\frac{1}{2}$

D) $\frac{3}{5}$

2) _____

Find the indicated probability.

- 3) A die with 12 sides is rolled. What is the probability of rolling a number less than 11?

A) $\frac{1}{12}$

B) $\frac{11}{12}$

C) 10

D) $\frac{5}{6}$

3) _____

Answer the question, considering an event to be "unusual" if its probability is less than or equal to 0.05.

- 4) Assume that a study of 300 randomly selected school bus routes showed that 280 arrived on time. Is it "unusual" for a school bus to arrive late?

A) Yes

B) No

4) _____

Find the indicated probability.

- 5) In a poll, respondents were asked whether they had ever been in a car accident. 157 respondents indicated that they had been in a car accident and 117 respondents said that they had not been in a car accident. If one of these respondents is randomly selected, what is the probability of getting someone who has been in a car accident? Round to the nearest thousandth, if necessary.

A) 1.342

B) 0.006

C) 0.573

D) 0.427

5) _____

Find the indicated complement.

- 6) Find $P(\overline{A})$, given that $P(A) = 0.776$.

A) 0

B) 1.776

C) 1.289

D) 0.224

6) _____

- 7) The probability that Luis will pass his statistics test is 0.26. Find the probability that he will fail his statistics test.

A) 0.13

B) 0.74

C) 0.35

D) 3.85

7) _____

Find the indicated probability.

- 8) A spinner has equal regions numbered 1 through 15. What is the probability that the spinner will stop on an even number or a multiple of 3?

A) 12

B) $\frac{7}{9}$

C) $\frac{1}{3}$

D) $\frac{2}{3}$

8) _____

9) The table below describes the smoking habits of a group of asthma sufferers.

9) _____

	Nonsmoker	Occasional smoker	Regular smoker	Heavy smoker	Total
Men	351	47	70	48	516
Women	395	40	87	43	565
Total	746	87	157	91	1081

If one of the 1081 people is randomly selected, find the probability of getting a regular or heavy smoker.

- A) 0.145 B) 0.476 C) 0.109 D) 0.229

10) A study of consumer smoking habits includes 175 people in the 18-22 age bracket (42 of whom smoke), 136 people in the 23-30 age bracket (40 of whom smoke), and 96 people in the 31-40 age bracket (26 of whom smoke). If one person is randomly selected from this sample, find the probability of getting someone who is age 23-30 or smokes.

10) _____

- A) 0.501 B) 0.294 C) 0.098 D) 0.6

11) A bag contains 6 red marbles, 2 blue marbles, and 1 green marble. Find $P(\text{not blue})$.

11) _____

- A) 7 B) $\frac{7}{9}$ C) $\frac{2}{9}$ D) $\frac{9}{7}$

12) A manufacturing process has a 70% yield, meaning that 70% of the products are acceptable and 30% are defective. If three of the products are randomly selected, find the probability that all of them are acceptable.

12) _____

- A) 2.1 B) 0.343 C) 0.027 D) 0.429

13) When a pair of dice are rolled there are 36 different possible outcomes: 1-1, 1-2, ... 6-6. If a pair of dice are rolled 5 times, what is the probability of getting a sum of 5 every time? Round to eight decimal places.

13) _____

- A) 0.04 B) 0.00005168 C) 0.00001694 D) 0.00032

14) You are dealt two cards successively (without replacement) from a shuffled deck of 52 playing cards. Find the probability that both cards are black. Express your answer as a simplified fraction.

14) _____

- A) $\frac{25}{102}$ B) $\frac{1}{2,652}$ C) $\frac{13}{51}$ D) $\frac{25}{51}$

15) A IRS auditor randomly selects 3 tax returns from 55 returns of which 6 contain errors. What is the probability that she selects none of those containing errors? Round to four decimal places.

15) _____

- A) 0.0008 B) 0.0013 C) 0.7071 D) 0.7023