

Practice Test 9.6-9.7

Date _____ Period ____ Score _____

- 1) Know all the formulas for probabilities ...
 there will be 4-5 questions on formulas
 $P(A|B)$ $P(A \cap B)$ $P(A \cup B)$
 independent and mutually exclusive
 events

Determine whether the scenario involves independent or dependent events.

- 2) There are seven nickels and four dimes in your pocket. You randomly pick a coin out of your pocket and place it on a counter. Then you randomly pick another coin. The first coin is a nickel and the second coin is a dime.

Find the probability in fraction form.

- 3) A bag contains eight red marbles and seven blue marbles. You randomly pick a marble and then return it to the bag before picking another marble. The first marble is red and the second marble is blue.
- 4) A basket contains six apples and six peaches. You randomly select one piece of fruit and eat it. Then you randomly select another piece of fruit. Both pieces of fruit are apples.

Events A and B are independent. Find the missing probability in fraction form.

5) $P(B) = \frac{1}{2}$ $P(A \cap B) = \frac{11}{40}$ $P(A) = ?$

6) $P(B) = \frac{7}{10}$ $P(A|B) = \frac{11}{20}$ $P(A) = ?$

7) $P(A) = \frac{2}{5}$ $P(B) = \frac{7}{20}$ $P(A \cap B) = ?$

8) $P(A) = \frac{9}{20}$ $P(B|A) = \frac{1}{5}$ $P(B) = ?$

Find the missing probability in fraction form (hint: they are not independent).

9) $P(A \cap B) = \frac{9}{200}$ $P(A|B) = \frac{9}{50}$ $P(B) = ?$

10) $P(A) = \frac{7}{10}$ $P(B|A) = \frac{4}{5}$ $P(A \text{ and } B) = ?$

Determine if the scenario involves mutually exclusive events.

- 11) You roll a fair six-sided die. The die shows an even number or a number greater than one.

Find the probability in fraction form.

12) A basket contains four apples, three peaches, and five pears. You randomly select a piece of fruit. It is an apple or a peach.

13) A basket contains five apples and six peaches. One of the apples and two of the peaches are rotten. You randomly pick a piece of fruit. It is fresh or it is a peach.

Determine if events A and B are mutually exclusive.

14) $P(A) = \frac{3}{10}$ $P(B) = \frac{7}{20}$ $P(A \cup B) = \frac{13}{20}$

Events A and B are mutually exclusive. Find the missing probability in fraction form.

15) $P(A) = \frac{13}{20}$ $P(B) = \frac{1}{5}$ $P(A \cup B) = ?$

16) $P(A) = \frac{13}{20}$ $P(B) = \frac{1}{5}$ $P(A \cap B) = ?$

17) $P(A) = \frac{11}{20}$ $P(B) = \frac{7}{20}$ $P(A|B) = ?$

Find the missing probability in fraction form.

18) $P(A) = \frac{9}{20}$ $P(A \cup B) = \frac{257}{400}$ $P(A \cap B) = \frac{63}{400}$ $P(B) = ?$

Find the probability of each event in fraction form.

19) Chelsea and Natalie each purchase one raffle ticket. If a total of eleven raffle tickets are sold and two winners will be selected, what is the probability that both Chelsea and Natalie win?

20) One day, six babies are born at a hospital. Assuming each baby has an equal chance of being a boy or girl, what is the probability that exactly two of the six babies are girls?

21) A spinner has an equal chance of landing on either red, blue, or green. You spin five times. What is the probability that spinner lands on red exactly two times?

22) Mike, Steve and Bill are chosen to shot at a target. Mike has been chosen 30% of the time, Steve 50% and Bill 20%. Mike hits the targe 25% of the time, Steve 30% and Bill 60%. An observer notices that the target has been hit. Find the probability in fraction form that Steve is the one who hit the target.

Answers to Practice Test 9.6-9.7 (ID: 1)

1)

5) $\frac{11}{20}$

9) $\frac{1}{4}$

12) $\frac{7}{12} \approx 0.583$

15) $\frac{17}{20}$

19) $\frac{1}{55} \approx 1.818\%$

2) Dependent

6) $\frac{11}{20}$

10) $\frac{14}{25}$

13) $\frac{10}{11} \approx 0.909$

16) 0

20) $\frac{15}{64} \approx 23.438\%$

3) $\frac{56}{225} \approx 0.249$

7) $\frac{7}{50}$

11) Not mutually exclusive

14) Mutually exclusive

17) 0

21) $\frac{80}{243} \approx 32.922\%$

4) $\frac{5}{22} \approx 0.227$

8) $\frac{1}{5}$

18) $\frac{7}{20}$

22) $10/23$