Probability Quiz Review

Name:_____

Period:_____

Probability

Determine whether each event is impossible, unlikely, as likely as not, likely, or certain.

1. rolling an even number on a number cube labeled 1 through 6 _____

2. picking a card with a vowel on it from a box of cards in which each letter of the alphabet is written on a card _____

3. spinning a number greater than 2 on a spinner with 10 equal sections marked 1 through 10 _____

4. drawing a red marble from a bag of black, blue, and green marbles _____

5. flipping a coin and getting heads or tails _____

6. rolling a number that is less than three 5 times in a row on a number cube labeled 1 through 6 _____

Experimental Probability

Find the experimental probability. Write your answer as a fraction, as a decimal, and as percent.

7. Jaclyn is a soccer goalie. If she has 21 out of 25 saves in practice, what is the experimental probability that she will have a save on the next shot on goal? _____

8. If Harris hit the bull's-eye 3 out of 8 times at archery practice, what is the experimental probability that he will hit the bull's-eye on his next try? _____

9. Nathan inspects new pants at a factory. Of the first 56 pairs of pants he inspected 49 were acceptable. What is the experimental probability that the next pair of pants will be acceptable? _____

10. Sara has gone to work for 60 days. On 39 of those days she arrived at work before 8:30 A.M. On the rest of the days she arrived after 8:30 A.M. What is the experimental probability that she will arrive at work after 8:30 A.M. the next day she goes to work? _____

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Experimental Probability (continued)

Solve.

11. After a movie premiere, 99 of the first 130 people surveyed said they liked the movie.

    a. What is the experimental probability that the next person surveyed will say he or she liked the movie?

    _____

    b. What is the experimental probability that the next person surveyed will say he or she did not like the movie?

    _____

12. For the past 30 days, Naomi has been recording the number of customers at her restaurant between 10 A.M. and 11 A.M. During that hour, there have been fewer than 20 customers on 25 out of 30 days.

    a. What is the experimental probability that there will be fewer than 20 customers on the thirty-first day?

    _____

    b. What is the experimental probability that there will be 20 or more customers on the thirty-first day?

    _____

13. For the past four weeks, Nestor has been recording the daily high temperatures. During that time, the high temperature has been below 45° on 20 out of 28 days. What is the experimental probability that the high temperature will be below 45° on the twenty-ninth day?

    _____

Theoretical Probability

Find the probability of each event. Write your answer as a fraction, as a decimal, and as a percent. Round to the nearest tenth of a percent.

14. randomly choosing a white counter from a bag of 12 red counters, 12 white counters, 12 green counters, and 12 blue counters

    _____

15. tossing two fair coins and having one land on tails and one land on heads

    _____

16. rolling a number greater than 1 on a fair number cube

    _____

Theoretical Probability (continued)

17. randomly choosing an orange disk from a bag of 14 black disks, 4 blue disks and 12 orange disks

_____

18. randomly choosing 1 of the 6 R's from a bag of 100 letter tiles

_____

19. spinning a number less than 7 on a fair spinner with 8 equal sections labeled 1–8

_____

A set of cards has 20 cards with stars, 10 cards with squares, and 15 cards with circles. Find the probability of each event when a card is chosen at random.

20. square _____   21. circle _____

22. star or circle _____   23. not circle or square _____

There are 14 girls and 18 boys in Ms. Wiley's class. Ms. Wiley randomly selects one student to solve a problem. Find the probability of each event.

24. selecting a boy _____   25. selecting a girl _____

Probability of Independent and Dependent Events

Decide whether each set of events is independent or dependent. Explain your answer.

26. A student spins a spinner and chooses a Scrabble® tile

_____

_____

27. A boy chooses a sock from a drawer of socks, then chooses a second sock without replacing the first.

_____

_____

28. A student picks a raffle ticket from a box, replaces the ticket, then picks a second raffle ticket.

_____

_____

Find the probability of each set of independent events.

29. picking a red checker from a bag of 9 black checkers and 6 red checkers, replacing it, and picking another red checker

_____

30. picking a black checker from a bag of 9 black checkers and 6 red checkers, replacing it, and picking a red checker

_____

31. rolling a 1, 2, or 3 on the first roll of a 1–6 number cube and rolling a 4, 5, or 6 on the second roll of the same cube

_____

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