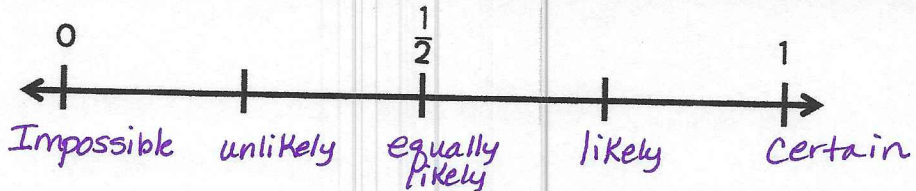Unit: Probability

Name __Answers__

Date _____ Pd___

SIMPLE PROBABILITY

Probability is the __likelihood__ of an event happening and is expressed as a number between __0__ and __1__.

Label the terms on the number line: unlikely, equally likely, impossible, certain, and likely.

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        0              1/2              1
   <----|------|--------|--------|------|---->
   Impossible  unlikely  equally  likely  Certain
                         likely
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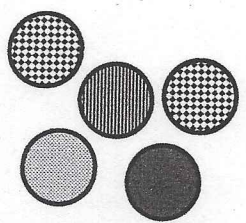
Read each example and label the situation with one of the terms above.

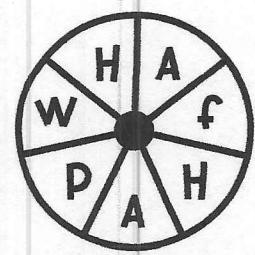| 1. Snowing when it's 40°F outside	2. Burning your dinner if you cook it too long	3. Water boiling at 75°F
Impossible	_Likely_	_Impossible_
4. Getting a ticket if you are speeding	5. Scoring two points on a safety in a football game	6. A coin landing on heads when it is flipped
Likely	_Unlikely_	_Equally Likely_

SIMPLE PROBABILITY

- Simple probability is the ratio of __Successful__ outcomes to the __total__ number of outcomes.

Ex: $P(A) = \dfrac{A}{total\ outcomes}$

7. What is the probability of choosing a marble with stripes?
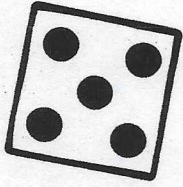
P(stripes) $\dfrac{1}{5}$

P (diamonds) $\dfrac{2}{5}$

8. What is the probability of spinning a W?

P(W) $\dfrac{1}{7}$

P (vowel) $\dfrac{2}{7}$

Read each of the problems below and determine the probability of each outcome.

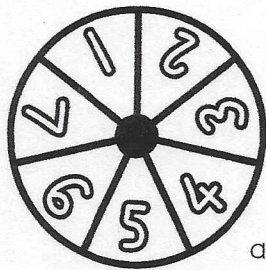9. A standard number cube is rolled. What is the probability of rolling...

a 6? $\frac{1}{6}$

a 5? $\frac{1}{5}$

an odd number? $\frac{3}{6}$

10. A laundry basket has 24 socks in it. Six were navy, 10 were black, and the remaining were white. What is the probability of drawing...

a black sock? $\frac{10}{24} = \frac{5}{12}$

a white sock? $\frac{8}{24} = \frac{1}{3}$

a navy sock? $\frac{6}{24} = \frac{1}{4}$

11. The spinner below is spun. What is the probability of spinning...

not a 6? $\frac{6}{7}$

a 3 or a 4? $\frac{2}{7}$

an odd number? $\frac{4}{7}$

12. The letters in the word SOCCER are put into a bag and drawn randomly. What is the probability of choosing...

a vowel? $\frac{2}{6} = \frac{1}{3}$

a consonant? $\frac{4}{6} = \frac{2}{3}$

the letter C? $\frac{2}{6} = \frac{1}{3}$

13. At the pediatrician's office, patients are able to draw a toy from the toy bin. The toy bin has 12 puzzles, 16 boxes of crayons, and 2 bouncy balls. What is the probability of drawing...

$\begin{array}{r} 12 \\ 16 \\ 2 \\ \hline 30 \end{array}$

anything but a bouncy ball? $\frac{28}{30} = \frac{14}{15}$

a box of crayons? $\frac{16}{30} = \frac{8}{15}$

a puzzle? $\frac{12}{30} = \frac{2}{5}$

14. In the movie drawer, there are seven action movies, five comedies, and three dramas. What is the probability of choosing...

$7+5+3 = 15$

a drama? $\frac{3}{15} = \frac{1}{5}$

anything but a comedy? $\frac{10}{15} = \frac{2}{3}$

an action? $\frac{7}{15}$

Answer the question below.

15. Students standing in line for lunch were surveyed about their favorite meal. Their responses are shown below. If one student is picked randomly, then which of the following is true?

Meal	Number of Students
Pizza	26
Spaghetti	8
Fajitas	16

A. The student's favorite meal is half as likely to be pizza than spaghetti.

B. The student's favorite meal is more likely to be fajitas than pizza.

C. The student's favorite meal is twice as likely to be spaghetti than pizza.

D. The student's favorite meal is twice as likely to be fajitas than spaghetti.

50