Name: Key
Date:
Period:

1) You spin the spinner below once. What is the probability of landing on the color blue?

Green
Blue
Red

$P(Blue) = \frac{1 \text{ blue}}{3 \text{ total}}$
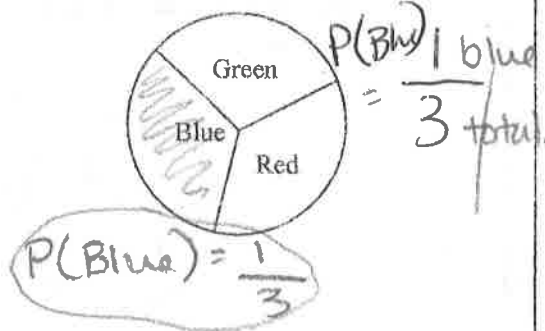
$P(Blue) = \frac{1}{3}$

2) You have a bag of marbles containing 8 red marbles, 4 yellow marbles, and 12 blue marbles. If you randomly pick marble from the bag, what is the probability that you will get a blue marble?

$P(Blue) = \frac{12}{24}$ $P(Blue) = \frac{1}{2}$

3) Ms. Namatovu has 7 pieces of candy in her purse. 4 are jolly ranchers and 3 are snickers. If she reaches in her purse without looking, what is the probability that she will grab a jolly rancher? Express as a fraction and a percent.

$P(J.R) = \frac{4}{7} \approx 57\%$

4) You have a number of coins in your pocket, including nickels, dimes and quarters. The probability of picking a dime is 2/5. The probability of picking a quarter is 3/10. What is the probability of picking a nickel?

$P(Nickel) = \frac{3}{10}$

$\frac{2}{5} + \frac{3}{10} + P(Nickel) = 1$

$\frac{4}{10} + \frac{3}{10} + \frac{?}{10} = \frac{10}{10}$

5) You roll a number cube 20 times, and the number eight appears 5 times. What is the experimental probability of getting an 8?
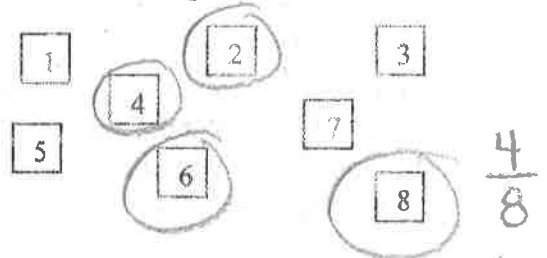
$P(8) = \frac{5}{20} = \frac{1}{4}$

$P(8) = \frac{1}{4}$

6) A die is rolled 12 times, and 6 comes up 4 times. How does the experimental probability compare with the theoretical probability?

$\frac{4}{12}$

$Exp. = P(6) = \frac{1}{3} = 33\%$

$Theo = P(6) = \frac{1}{6} = 17\%$

Experimental probability was about 16% higher than theo prob.

7) The eight chips below are placed in a bag and then mixed up.

1
2
3
4
5
6
7
8

$\frac{4}{8}$

What is the probability that Rachel will pick an even numbered chip?

$P(even) = \frac{1}{2}$

8) You flip a coin. How likely is it that the coin will land on Heads rather than Tails?

$P(heads) = \frac{1}{2}$

A. Certain
B. Likely
C. Equally likely
D. Unlikely
E. Impossible

9) A bag of M & M's contains 16 blue, 25 red, 5 yellow, and 4 green. What is the probability that Scout will eat a yellow M & M?

a. About 20 %

b. About 5 %

c. About 6 %

(d.) About 10 %

$\frac{16}{25}$

$+ \frac{5}{4}$

$\overline{50}$ whole

$\frac{5}{50} = \frac{1}{10}$

10%

10.) A drawer of socks contains 28 socks, 12 of which are black and 16 are blue. What is the **probability of pulling a black sock** out of the drawer? Express as a <u>fraction</u> and a <u>percent</u>.

$P(black) = \frac{3}{7} \approx 43\%$

$\frac{12}{28} = \frac{3}{7}$ $.43$

11.) Lakira has a number cube with 1- 6. If she rolls the cube 72 times, how many times would she expect to get a 4?

$\frac{P(4)}{total} \quad \frac{1}{6} = \frac{x}{72}$ (12 times)

$\frac{6x = 72}{6} \quad \overline{6}$

12.) Shontya was early to class 15 out of 20 times. Based on that rate, what is the probability that she will be early to class the next time?
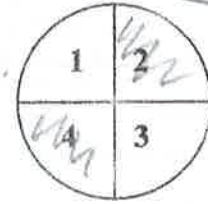
a. 15%

b. 20%

(c.) 75%

d. 90%

$P(early) = \frac{15}{20}$

13.) Using the spinner below, if you spin the spinner 48 times, how many times can you expect it to land on an even number?

$P(even) = \frac{1}{2}$

24 times

$\frac{P(even)}{total} \quad \frac{1}{2} = \frac{x}{48}$

$\frac{2x = 48}{2} \quad \overline{2}$ $x = 24$

14.) Zeke has a spinner with the numbers 1-10 on it. If he spins the spinner 80 times, how many times would he predict landing on the number 7?

$\frac{P(7)}{total} \quad \frac{1}{10} = \frac{x}{80}$ (8 times)

$\frac{10x = 80}{10} \quad \overline{10}$ $x = 8$

15.) Greg Fishel predicted rain correctly 9 out of 10 times. Based on that rate, what is the probability that he will be right next time?
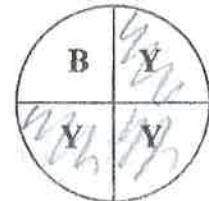
a. 9 %

b. 10 %

c. 75%

(d.) 90%

$\frac{9}{10} = 90\%$

16.) Using the spinner below, how likely are you to spin a yellow rather than a blue?

$\frac{3}{4}$

A. Certain

(B) Likely

C. Equally likely

D. Unlikely

E. Impossible