

Key

SAMPLE PROBABILITY QUESTIONS:

1) A bag contains 7 blue, 5 purple, 12 red, and 6 orange marbles. Find each probability if you draw one marble at random from the bag. Write as a fraction in simplest form.

a) P(purple)

$$\frac{5}{30} \text{ or } \frac{1}{6}$$

b) P(red or orange)

$$\frac{18}{30} \text{ or } \frac{3}{5}$$

c) P(not blue)

$$\frac{23}{30}$$

2) You roll a standard number cube (six sides numbered 1 - 6). After one roll, answer the following:

a) P(3 or 4)

$$\frac{2}{6} \text{ or } \frac{1}{3}$$

b) P(even #)

$$\frac{3}{6} \text{ or } \frac{1}{2}$$

c) P(not 2)

$$\frac{5}{6}$$

3) Fill in the following information about a standard deck of cards:

TOTAL # of Cards: 52

of Hearts(♥): 13

of Diamonds(♦): 13

of Clubs(♣): 13

of Spades(♠): 13

of Red Cards: 26

of Black Cards: 26

Cards in Each Suit: 13



Now, given the above, answer the following:

a) P(Ace)

$$\frac{4}{52} \text{ or } \frac{1}{13}$$

b) P(red card)

$$\frac{26}{52} \text{ or } \frac{1}{2}$$

c) P(Red King)

$$\frac{2}{52} \text{ or } \frac{1}{26}$$

d) P(Club)

$$\frac{13}{52} \text{ or } \frac{1}{4}$$

4) Given the spinner to the right, answer the following:

a) P(5)

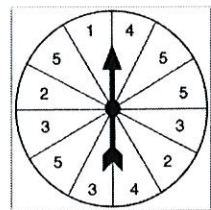
$$\frac{4}{12} \text{ or } \frac{1}{3}$$

b) P(odd #)

$$\frac{8}{12} \text{ or } \frac{2}{3}$$

c) P(2 or an odd #)

$$\frac{10}{12} \text{ or } \frac{5}{6}$$



SAMPLE "EXPERIMENTAL" PROBABILITY QUESTIONS:

- 5) Mike was practicing basketball shots. Out of 24 attempts, he made 21 baskets. Based on this rate, what is the probability that Mike's next shot will go in the basket?

$\frac{21}{24}$ or $\frac{7}{8}$

- 6) Jane was throwing darts. Out of 12 attempts, 3 were bulls-eyes. If Jane were to make 36 attempts, how many *should* be bulls-eyes?

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- 7) A coin was flipped fifty times. Out of 50, it landed on heads 30 times. What is the **experimental probability** that the coin will land on heads on the next toss? How is this different from the **theoretical probability**?

Exp: $\frac{30}{50}$ or $\frac{3}{5}$ Theor. $\frac{1}{2}$

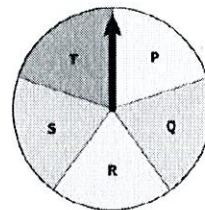
Experimental was greater than theoretical

- 8) The spinner shown has 5 sections of equal size. The arrow of this spinner was spun 20 times and landed on the section labeled "R" 7 times. Compare the *theoretical probability* with the *experimental probability* of the spinner landing on "R."

Exp: $\frac{7}{20}$

Theor: $\frac{1}{5}$

Exp. was greater than theoretical

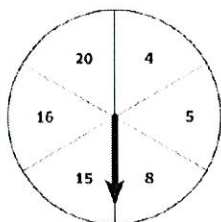


- 9) The table shown depicts the results of 50 rolls of a fair number cube numbered 1 - 6. According to the table, what was the *experimental probability* of rolling a 3?

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

Number	Frequency
1	8
2	9
3	5
4	15
5	2
6	11

- 10) The arrow of this spinner was spun 40 times. On 25 out of 40 times, the arrow landed on a section labeled with a multiple of 4. What was the *experimental probability* of the arrow landing on a section labeled with a multiple of 4?



$\frac{25}{40}$ or $\frac{5}{8}$