

Name \_\_\_\_\_

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Answer the question.

- 1) Find the odds against correctly guessing the answer to a multiple choice question with 4 possible answers.

1) B

A) 4 : 1

B) 3 : 1

C) 3 : 4

D) 4 : 3

$$P(\text{Correctly Answering}) = \frac{1}{4} \Rightarrow \text{ODDS Against are } 3:1$$

- 2) In a certain town, 10% of people commute to work by bicycle. If a person is selected randomly from the town, what are the odds against selecting someone who commutes by bicycle?

2) B

A) 1 : 9

B) 9 : 1

C) 9 : 10

D) 1 : 10

$$P(\text{Commute}) = 0.1 = \frac{1}{10} \Rightarrow \text{ODDS Against commuting are } 9:1$$

Find the indicated probability.

- 3) A spinner has equal regions numbered 1 through 15. What is the probability that the spinner will stop on an even number or a multiple of 3?

3) C

A) 12

B)  $\frac{7}{9}$ C)  $\frac{2}{3}$ D)  $\frac{1}{3}$ 

$$\begin{aligned} \text{EVEN No.} &: 2, 4, 6, 8, 10, 12, 14 \\ \text{Multiple of 3} &: 3, 6, 9, 12, 15 \end{aligned} \Rightarrow P(\text{Even OR Multiple of 3}) = \frac{7}{15} + \frac{5}{15} - \frac{2}{15} = \frac{10}{15} = \frac{2}{3}$$

- 4) You are dealt two cards successively (without replacement) from a shuffled deck of 52 playing cards. Find the probability that the first card is a King and the second card is a queen.

4) CA)  $\frac{1}{663}$ B)  $\frac{2}{13}$ C)  $\frac{4}{663}$ D)  $\frac{13}{102}$ 

$$\begin{aligned} P(\text{King, Queen}) &= \frac{4}{52} \times \frac{4}{51} \\ &= \frac{1}{13} \times \frac{4}{51} \\ &= \frac{4}{663} \end{aligned}$$