

QUESTION 1 Using the terms of probability, rate the following events as certain, likely, unlikely, impossible, or even chance.

- | | |
|--|---|
| a a lion having four legs
_____ | b rolling a 7 with a normal die
_____ |
| c choosing a black card from a normal pack of cards. _____ | d Monday will follow Sunday next week
_____ |
| e winning Lotto (assuming you have not bought a ticket) _____ | f throwing a tail with a coin
_____ |
| g rolling a 3 with a normal die
_____ | h a year having 410 days
_____ |

QUESTION 2 Select the most appropriate from 0%, 25%, 50%, 75% and 100% to describe the chance implied by each of the following words.

- | | |
|---------------------------|-------------------------------|
| a certain _____ | b an even chance _____ |
| c probably _____ | d impossible _____ |
| e unlikely _____ | f perhaps _____ |
| g definitely _____ | h likely _____ |
| i possibly _____ | |

QUESTION 3 Select from certain, most likely, even chance, unlikely, or impossible to best describe an event that has a probability of the following.

- | | | |
|------------------------------|--------------------------------|-------------------------------|
| a 90% _____ | b $\frac{1}{2}$ _____ | c 1 _____ |
| d 0 _____ | e 15% _____ | f $\frac{8}{9}$ _____ |
| g 100% _____ | h 0.007 _____ | i 75% _____ |
| j $\frac{5}{6}$ _____ | k $\frac{1}{200}$ _____ | l 98% _____ |
| m 50% _____ | n 0.125 _____ | o $\frac{1}{80}$ _____ |
| p 0.93 _____ | q 7% _____ | r 99% _____ |

QUESTION 1 Write the sample space for each of the following.

- a selecting a day of the week _____

- b selecting a month of the year _____

- c rolling a die once _____
- d tossing a coin once _____
- e selecting a queen from the set of queens in a normal pack of playing cards _____

- f selecting a vowel _____

- g choosing a letter from the alphabet _____

- h choosing a digit from the counting numbers less than 8 _____

QUESTION 3 For each of the following probability experiments, write the number of elements in the sample space.

- a selecting a number from a normal die _____
- b selecting a face when tossing a coin _____
- c selecting a card from a normal pack of cards _____
- d selecting a digit from the counting numbers less than 10 _____
- e selecting a ball drawn in a Lotto draw (the balls are numbered 1–45) _____

Page 1 1 a certain b impossible c even chance d certain e impossible f even chance g unlikely h impossible 2 a 100% b 50% c 75% d 0% e 25% f 25% g 100% h 75% i 25% 3 a most likely b even chance c certain d impossible e unlikely f most likely g certain h unlikely i most likely j most likely k unlikely l most likely m even chance n unlikely o unlikely p most likely q unlikely r most likely

Page 2 1 a {Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday} b {January, Feb., March, April, May, June, July, Aug., Sept., Oct., Nov., Dec.} c {1, 2, 3, 4, 5, 6} d {Head, Tail} e {queen spades, queen clubs, queen hearts, queen diamonds} f {a, e, i, o, u} g {a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z} h {1, 2, 3, 4, 5, 6, 7}

3 a 6 b 2 c 52 d 9 e 45