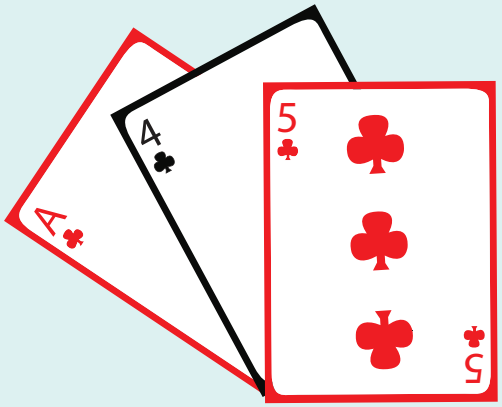
8th Grade

Statistics & Probability

$$\text{Mean} = \frac{\text{Sum of all observations}}{\text{Number of observations}}$$



Stem & Leaf Plot

Stem	Leaf	
7	2, 3	72, 73
8	6, 6	86, 86
9	4, 7	94, 97

$0 \leq P(A) \leq 1$

$P(S) = 1$

Range = Largest – Smallest

Workbook 1

Mean, Median, Mode & Range

Find the mean, median, mode and range in each problem.

1) A fast food restaurant collects the soft drink cans for recycling. The number of cans collected in two weeks are given below.

84, 97, 77, 31, 84, 63, 58, 72, 47, 84, 69, 94, 43, 68

Mean : _____ Median : _____ Mode : _____ Range : _____

2) A health centre recorded the height (in cm) of ten male toddlers (one year old) who came for vaccination. The heights are given below.

64, 71, 70, 68, 71, 75, 66, 65, 71, 69

Mean : _____ Median : _____ Mode : _____ Range : _____

3) The Central library has Science books kept in 12 racks. The number of books kept in each rack are given below.

40, 58, 62, 36, 42, 58, 56, 58, 71, 66, 47, 73

Mean : _____ Median : _____ Mode : _____ Range : _____

4) The retail price of fresh and whole milk (in dollars) per gallon in the United States from 2006 to 2014 is the following.

3, 3.9, 3.7, 3.1, 3.3, 3.6, 3.6, 3.5, 3.8

Mean : _____ Median : _____ Mode : _____ Range : _____

5) A dendrologist measures the height (in feet) of a Mature Red Maple, Big Leaf Maple, Jack Pine, Eastern White Pine, Loblolly Pine, Salsh Pine, Longleaf Pine, Black spruce and Balsam Fir. The recorded heights are given below.

73, 68, 73, 85, 92, 81, 88, 35, 48

Mean : _____ Median : _____ Mode : _____ Range : _____

Outliers

Write the outliers for each set of data.

1) 92, 88, 106, 169, 76, 72, 67, 10, 115, 73, 111, 59

Outliers : _____

2) 20, 52, 86, 80, 44, 49, 57, 41, 44, 55

Outliers : _____

3) 4, 11.6, 50, 23, 20.1, 19, 29, 12.7, 8, 23, 57.5

Outliers : _____

4) 67, 71, 79, 65, 52, 71, 73, 94, 69

Outliers : _____

5) 18, 68, 15, 45, 46, 36, 72, 34, 42, 38

Outliers : _____

6) 77, 51.4, 82, 91.6, 87, 98, 59, 81.4, 76, 119, 85, 91

Outliers : _____

7) 6, 24, 84, 13, 9, 30, 25, 7, 21, 33, 71

Outliers : _____

8) 22, 26, 31, 37, 31, 26, 50, 28, 24

Outliers : _____

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Deck of Cards

A card is drawn from a deck of 52 cards.

1) What is the probability of drawing a black card?

_____

2) Find the probability of drawing a red card.

_____

3) What is the probability of drawing a red or black?

_____

4) Find the probability of drawing an ace.

_____

5) What is the probability of drawing either a jack or queen or king?

_____

Independent and Dependent

A box contains 2 red marbles, 3 white marbles, 4 green marbles and 1 blue marble. Two marbles are drawn at random without replacement.

1) Find the probability of selecting a green marble on the second draw, if the first marble is blue.

_____

2) What is the probability of selecting a white marble on the first draw and red marble on the second draw?

_____

3) Find the probability of selecting a red marble on both draws.

_____

4) Determine the probability of selecting a red or white on the first draw and green or blue on the second draw.

_____

5) Find the probability of selecting a white marble on the first draw and a white or blue on the second draw.

_____