

W
8.11.21

Ch-11 Average

Exercise-11 (A)



1) Find the average.

a. 50, 41, 47, 48, 40, 44

Ans:
$$\frac{\text{Sum of the numbers}}{\text{Number of quantities}} = \frac{50 + 41 + 47 + 48 + 40 + 44}{6}$$

$$= \frac{270}{6} = 45$$

b. 10, 20, 30, 40, 50, 60, 70, 80, 90, 100

Ans:
$$\frac{\text{Sum of the quantities}}{\text{Number of quantities}} =$$

$$\frac{10 + 20 + 30 + 40 + 50 + 60 + 70 + 80 + 90 + 100}{10}$$

$$= \frac{550}{10} = 55$$

c. 35, 42, 31, 53, 16, 24, 27

Ans:
$$\frac{\text{Sum of the quantities}}{\text{Number of quantities}} =$$

$$\frac{35 + 42 + 31 + 53 + 16 + 34 + 27}{7}$$

$$\frac{238}{7} = 34$$

d. $24, 21, 26, 25, 18, 20, 27, 23$

Ans: $\frac{\text{Sum of the quantities}}{\text{Number of quantities}}$

$$\frac{24 + 21 + 26 + 25 + 18 + 20 + 27 + 23}{8}$$

$$\frac{184}{8} = 23$$

e. $\frac{3}{8}, 1\frac{1}{4}, 2\frac{5}{6}, 4\frac{1}{2}, 6\frac{4}{3}$

Ans: $\frac{3}{8} + \frac{5}{4} + \frac{17}{6} + \frac{9}{6} + \frac{22}{3} =$

$$\frac{9 + 30 + 68 + 108 + 176}{24} = \frac{391}{24}$$

The number of quantities given = 5

$$\text{Average} = \frac{391}{24} \div 5 = \frac{391}{24} \times \frac{1}{5} = \frac{391}{120} = 3\frac{31}{120}$$

f. $2\frac{3}{5}, 3\frac{3}{10}, 3\frac{1}{2}, \frac{2}{5}, \frac{9}{10}, 1\frac{1}{2}$

Ans: $\frac{13}{5} + \frac{33}{10} + \frac{7}{2} + \frac{2}{5} + \frac{9}{10} + \frac{3}{2} =$

$$\frac{26 + 33 + 35 + 4 + 9 + 15}{10} = \frac{122}{10}$$

The number of quantities given = 6

$$\frac{122}{10} \div 6 = \frac{122}{10} \times \frac{1}{6} = \frac{122}{60} = 2\frac{2}{60}$$

g. $\frac{7}{12}, 2\frac{5}{6}, 5\frac{3}{4}, \frac{1}{2}, \frac{5}{12}, \frac{1}{6}$

Ans: $\frac{7}{12} + \frac{17}{6} + \frac{23}{4} + \frac{1}{2} + \frac{5}{12} + \frac{1}{6} =$

$$\frac{7+34+69+6+5+2}{12} = \frac{123}{12}$$

Number of quantities given = 6

$$\frac{123}{12} \div 6 = \frac{\overset{41}{\cancel{123}}}{12} \times \frac{1}{\underset{2}{\cancel{8}}} = \frac{41}{24} = 1 \frac{17}{24}$$

h. $\frac{1}{4}, \frac{3}{4}, \frac{1}{2}, \frac{1}{6}, \frac{3}{8}$

Ans. $\frac{1}{4} + \frac{3}{4} + \frac{1}{2} + \frac{1}{6} + \frac{3}{8} =$

$$\frac{6+18+12+4+9}{24} = \frac{49}{24}$$

Number of quantities given = 5

$$\frac{49}{24} \div 5 = \frac{49}{24} \times \frac{1}{5} = \frac{49}{120}$$

Date _____
Page _____

2) The rainfall in Jamshedpur for 6 consecutive years was 28.5 cm, 30.25 cm, 32.4 cm, 31.6 cm, 24 cm and 30.25 cm.

Ans: Rainfall in first year = 28.5 cm

Rainfall in second year = 30.25 cm

Rainfall in third year = 32.4 cm

Rainfall in fourth year = 31.6 cm

Rainfall in fifth year = 24 cm

Rainfall in sixth year = 30.25 cm

Average rainfall of Jamshedpur = $28.5 + 30.25 + 32.4 + 31.6 + 24 + 30.25 = 177$

The number of quantities given = 6

$$177 \div 6 = 29.5 \text{ cm}$$

So, 29.5 cm is the average rainfall in Jamshedpur.

3) Find the average of all even number between 7 and 23

Ans: Even number between 7 and 23 = 8, 10, 12, 14, 16, 18, 20, 22

$$\text{Average} = \frac{8 + 10 + 12 + 14 + 16 + 18 + 20 + 22}{8}$$

$$= \frac{120}{8} = 15$$

Hence, the average of all even number between 7 and 23 is 15.

4) Find the average of all ~~even~~ odd numbers between 10 and 30

Ans: Odd numbers between 10 and 30 = 11, 13, 15, 17, 19, 21, 23, 25, 27, 29

$$\text{Average} = \frac{11 + 13 + 15 + 17 + 19 + 21 + 23 + 25 + 27 + 29}{10}$$

$$= \frac{200}{10} = 20$$