

Exercise 11 A

1. Find the average

a) $50, 41, 47, 48, 40, 44 = 50 + 41 + 47 + 48 + 40 + 44 = 270$
 $270 \div 6 = 45$

b) ~~10~~ $10, 20, 30, 40, 50, 60, 70, 80, 90, 100 = 10 + 20 + 30 + 40 + 50$
 $+ 60 + 70 + 80 + 90 + 100 = 550 / 10 = 55$

c. $35, 42, 31, 53, 16, 34, 27 = 35 + 42 + 31 + 53 + 16 + 34 + 27$
 $= 238 / 7 = 34$

d. $24 + 21 + 26 + 25 + 18 + 20 + 27 + 23 = 184 / 8 = 23$

$$\frac{26+33+35+4+9+15}{10, 10, 10, 10, 10, 10} = \frac{122}{10} \times \frac{1}{6} = \frac{42}{60} = \frac{28}{40} = \frac{13}{15}$$

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

$$\frac{12}{12} \cdot \frac{3}{8} + \frac{3}{4} + \frac{17}{6} + \frac{9}{2} + \frac{22}{3} = \frac{9+30+168+108+176}{24} \quad \text{LCM}=24$$

$$= \frac{391}{24} \div 5 \text{ (quantities)} = \frac{391}{24} \times \frac{1}{5} = \frac{391}{120}$$

$$= 3\frac{31}{120}$$

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

$$\frac{13}{5} + \frac{33}{10} + \frac{7}{2} + \frac{2}{5} + \frac{9}{10} + \frac{3}{2} = \text{LCM}=10$$

$$\frac{26}{10} + \frac{33}{10} + \frac{35}{10} + \frac{4}{10} + \frac{9}{10} + \frac{15}{10} = \frac{122}{10} \times \frac{1}{6} = \frac{122}{60} = \frac{61}{30}$$

$$= 2\frac{1}{30}$$

g) $\frac{7}{12}, 2\frac{5}{6}, 15\frac{3}{4}, \frac{1}{2}, \frac{5}{12}, \frac{1}{6} = \frac{7}{12} + \frac{17}{6} + \frac{23}{4} + \frac{1}{2} + \frac{5}{12} + \frac{1}{6}$

LCM=12

$$\frac{7+34+69+6+5+2}{12} = \frac{123}{12} \times \frac{1}{6} = \frac{123}{72} = \frac{41}{24} = 1 \frac{17}{24}$$

(h) $\frac{1}{4} + \frac{3}{4} + \frac{1}{2} + \frac{1}{6} + \frac{3}{8} = \text{LCM} = 24$
 $\frac{6+18+12+4+9}{24} = \frac{49}{24}$

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

2 The rainfall in Jamshedpur for 6 consecutive years was 28.5 cm, ~~20.5 cm~~ 30.25 cm ~~and the~~ 32.4 cm, 31.6 cm, 24 cm and 30.25 cm. Find the average rainfall of Jamshedpur.

ans	Rainfall in the first year = 28.5 cm	ADD
	Rainfall in the second year = 30.25	28.50
	Rainfall in the third year = 30 32.4	+ 30.25
	Rainfall in the fourth year = 31.6	31.60
	Rainfall in the fifth year = 24	24.00
	Rainfall in the sixth year = 30.25	30.25
		+ 32.40
	$\frac{177}{1} \times \frac{1}{6} = 177 \div 6 = 29.5$	6 177.00
		177.00

Thus the average rainfall of Jamshedpur is 29.5 cm

$$\begin{array}{r} 12 \\ 57 \\ 54 \\ \hline 30 \\ 30 \\ \hline 0 \end{array}$$

3) The even number between 7 to 23 = 8, 10, 12, 14, 16, 18, 20, 22

$$\text{The total sum of } \text{\textcircled{e}} \text{ even number} = 8 + 10 + 12 + 14 + 16 + 18 + 20 + 22 \\ = 120$$

$$\text{The average of the } \text{\textcircled{e}} \text{ even numbers} = 120/8 = \frac{30}{2} = 15$$

4. The odd number between 10 to 30 = 11, 13, 15, 17, 19, 21, 23, 25, 27, 29

Total sum of the odd numbers between 10 to 30 =

$$11 + 13 + 15 + 17 + 19 + 21 + 23 + 25 + 27 + 29 = 200$$

Q The average of these odd number = $200 / \text{quantities} =$

$$200/10 = 20$$