SCHOOL ACCOLADES

Std-5

Elementary Mathematics

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Ex-3:

1) The class 30-34 includes more students than others.

2) (3+5) or 8 students are less than equal to 20 kg in weight.

Here total students: 25 persons

∴ The percent of students who are less than or equal to 20 kg in weight

$$= \frac{8 \times 4}{25 \times 4} = \frac{32}{100} = 32\%$$

so, 32% students are less than or equal to 20 kg in weight.

3) In the case of grade 4: There are more students (8 students) in the class interval of 30-34. On the other hand, there are less students (3 students) in both the class intervals of 20-24 and 40-44.

b) In the case of grade 5: There are more students (7 students) in the class interval of 35-39. On the other hand, there are less students (2 students) in each of the class intervals of 20-24 and 45-50.

Ex-13.3: The above table tells us that India is a country of the highest population and Singapore is a country of the lowest population in 2010 amongst neighbouring countries of Bangladesh.

Now let us compare below the population of the countries mentioned in the table arranging in ascending order:

48 lac < 2 crore 4 lac < 2 crore 70 Lac < 2 crore 99 lac < 5 crore 5 lac < 6 crore 18 lac < 14 crore 23 Lac < 18 crore 48 lac < 121 crore 45 lac

Ex-2: Here,

Population density of the village of A = $\frac{550}{50}$ people/Km = 11 people/Km

Population density of the village of B = $\frac{320}{20}$ people/Km = 16 people/Km

∴ The population density of the village of B is more.

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Ex-3: 1) According to the given data,

i) Division of Dhaka has the largest population.

ii) Division of Chittagong has the largest population.

iii) Division of Dhaka has the largest population density.

2) Population density of a certain region/place depends on the size of population that region/place. The area of Khulna division is much more greater that that of Shylhet division whereas population of Khulna is greater but not proportionately greater than Shylhet. That is why, density of population of Khulna is not greater than Shylhet.

3) Barisal division can one person occupy more land.

Exercise-13:

Ex-1: 1) For class 4:

Maximum time period of home work = 90 minutes

Minimum time period of home work = 10 minutes.

For class 5:

Maximum time period of home work = 110 minutes.

Minimum time period of home work = 20 minutes.

2) For class 4:

Total time period of home work = 30+90+40+10+50+40+80+60+40+80 + 60+80+20+60+20+70+50+10+70+60

= 1020 minutes.

Total number of students = 20

∴ Average time period of home work = $\frac{\cancel{1020}^{51}}{\cancel{20}}$ minutes = 51 minutes.

For class 5:

Total time period of home work = 20+60+90+30+20+20+110+60+20 +20+40+50+70+80+60+30+20+90+90+60

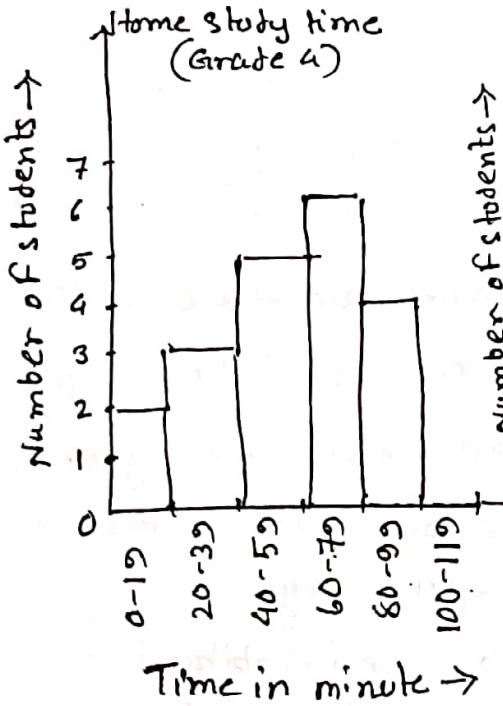
= 1040 minutes.

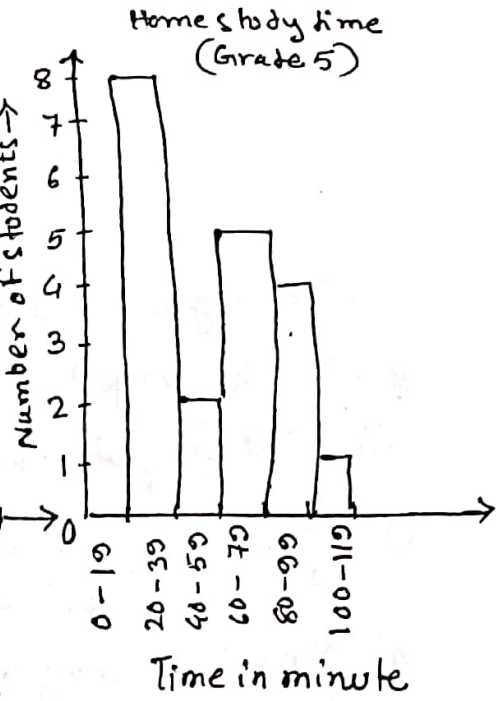
Total number of students = 20

∴ Average time period of home work = $\frac{1040}{20}$ minutes = 52 minute

3) Now, a histogram of the data of the table beside is drawn below:

Time minutes	Grade 4	Grade 5
0 - 19	2	0
20 - 39	3	8
40 - 59	5	2
60 - 79	6	5
80 - 99	4	4
100 - 119	0	1
Total	20	20





4) From the histogram for class 4 and class 5, it is observed that in class 4, only two students do their homework for the time period in the range of 1-19 min and it is the least number of students whereas in class 5, no students is found to do the homework for the time period in the range of 1-19 min. Again, 6 students of class 4 is found doing homework for time period from 60 - 79 min and it is the highest number of students whereas in class 5, 8 students are found doing homework for the time period from 20 - 39 min and it is the highest number of students.

5)

Ex-2: 1) Total number of students of class 5 have come under the survey = $2+4+5+6+8+7+4+3+1 = 40$

2) Maximum students lie in the class of 20 -24.

3) Here total number of students = 40

Total number of students need time more than 30 minutes = $4+3+1 = 8$

∴ Percentage of student need time more than 30 minutes = $\frac{8}{40} \times 100 \times \frac{5}{5}$

$= \frac{40}{200} = \frac{40}{2 \times 100} = \frac{20}{100}$

$= 20\%$

Ans: 20 %

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Ex-3: 1) $a = \frac{1800}{15} = 120$, $110 = \frac{2200}{b}$, $60 = \frac{c}{25}$, $d = \frac{2240}{8}$

$\Rightarrow 110 \times b = 2200$ $\Rightarrow 60 \times 25 = c$ $\therefore d = 280$

$\Rightarrow b = \frac{2200}{110}$ $\Rightarrow c = 60 \times 25$

$\therefore b = 20$ $\therefore c = 1500$

2) i) The largest population are there in the village D.

ii) The largest area is of the village of C.

iii) The largest population density ~~of~~ is of the village of D.

3) There may be a big bazar in the village of D, because it is a population village.

4) Mr Hakim may be an inhabitant of the village of C, because its population density is low.

Chapter 7

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Example 7.7: Here Total length of a wire = 2.4 metres.

Weight of 1 metre = 400 gm

According to Mina's idea,

Weight of 2.4 metres of wire is $\frac{1}{10}$ part of weight of 24 metres of wire.

$\therefore$ Weight of 2.4 metres wire $= 2.4 \times 400$ gm

$= \frac{24 \times 400}{10}$ gm

$= 960$ gm

Ans: Weight of the wire is 960 gm.

Example-1: Here the weight of 1 metre of wire = 400 gm

Total length of a wire = 0.8 metres.

According to Mina's idea,

Weight of 0.8 metres of wire is $\frac{1}{10}$ part of 8 metres of wire.

$\therefore$ Weight of 0.8 metres wire $= 0.8 \times 400$ gm

$= \frac{8}{10} \times 400$ gm

$= \frac{8 \times 400}{10}$ gm

$= 320$ gm

Ans: 320 gm

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or,
According to Reza's idea,
0.8 metres are equal to 8 units of 0.1 metres
Weight of 0.1 metre of wire is $\frac{1}{10}$ part of 400 gm
that is, 400 gm ÷ 10 = $\frac{400}{10}$ gm = 40 gm
∴ 0.8 metres wire weights = 40 × 8 gm = 320 gm

Ex-2: Multiply:

1) $30 \times 1.2 = 3\cancel{0} \times \frac{12}{1\cancel{0}}$
$= 36$
Ans: 36

2) $4 \times 1.3 = 4 \times \frac{13}{10}$
$= \frac{52}{10}$
$= 5.2$
Ans: 5.2

3) $35 \times 2.4 = 35 \times \frac{24}{10}$
$= \frac{84\cancel{0}}{1\cancel{0}}$
$= 84$
Ans: 84

4) $50 \times 0.7 = 5\cancel{0} \times \frac{7}{1\cancel{0}}$
$= 35$
Ans: 35

5) $8 \times 0.6 = 8 \times \frac{6}{10}$
$= \frac{48}{10}$
$= 4.8$ Ans: 4.8

6) $25 \times 0.4 = 25 \times \frac{4}{10}$
$= \frac{10\cancel{0}}{1\cancel{0}}$
$= 10$
Ans: 10

Example-1: Here total length of a wire = 1.4 metres.
Weight of 1 metre = 2.3 Kg
∴ weight of 1.4 metres of wire is $\frac{1}{10}$ part of 14 metres of wire.
∴ Weight of 1.4 metres wire = 1.4 × 2.3 Kg
$= \frac{14}{10} \times \frac{23}{10}$ Kg
$= \frac{322}{100}$ Kg
= 3.22 Kg

$$\begin{array}{r} 23 \\ \times 14 \\ \hline 92 \\ 230 \\ \hline 322 \end{array}$$

Ans: 3.22 Kg

Ex-3: Multiply vertically:

1) 3.2 × 1.24 =

$$\begin{array}{r} 32 \\ \times 124 \\ \hline 128 \\ 640 \\ 3200 \\ \hline 3988 \end{array}$$

∴ 3.2 × 1.24 = 3.988
Ans: 3.988

2) 4.37 × 6.8

$$\begin{array}{r} 437 \\ \times 68 \\ \hline 3496 \\ 26220 \\ \hline 29716 \end{array}$$

∴ 4.37 × 6.8 = 29.716
Ans: 29.716

3) 0.35 × 2.9

$$\begin{array}{r} 35 \\ \times 29 \\ \hline 315 \\ +700 \\ \hline 1015 \end{array}$$

∴ 0.35 × 2.9 = 1.015
Ans: 1.015

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4) 4.1×0.73

$$\begin{array}{r} 41 \\ \times\ 73 \\ \hline 123 \\ 2870 \\ \hline 2993 \end{array}$$

$\therefore 4.1 \times 0.73 = 2.993$

Ans: 2.993

5)

$$\begin{array}{r} 368 \\ \times\ 15 \\ \hline 1840 \\ +\ 3680 \\ \hline 5520 \end{array}$$

$\therefore 3.68 \times 0.15 = 0.5520$

Ans: 0.5520

6) 0.74×2.5

$$\begin{array}{r} 74 \\ \times\ 25 \\ \hline 370 \\ 1480 \\ \hline 1850 \end{array}$$

$\therefore 0.74 \times 2.5 = 1.850$

Ans: 1.850

7)

$$\begin{array}{r} 032 \\ \times\ 04 \\ \hline 0128 \end{array}$$

$\therefore 0.32 \times 0.4 = 0.128$

Ans: 0.128

8)

$$\begin{array}{r} 06 \\ \times\ 013 \\ \hline 18 \\ 060 \\ \hline 078 \end{array}$$

$\therefore 0.6 \times 0.13 = 0.078$

Ans: 0.078

9)

$$\begin{array}{r} 025 \\ \times\ 08 \\ \hline 0200 \end{array}$$

$\therefore 0.25 \times 0.8$

$= 0.200$

$= 0.2$

Ans: 0.2

10)

$$\begin{array}{r} 29 \\ \times\ 473 \\ \hline 87 \\ 2030 \\ 11600 \\ \hline 13717 \end{array}$$

$\therefore 29 \times 4.73 = 137.17$

Ans: 137.17

11)

$$\begin{array}{r} 18 \\ \times\ 065 \\ \hline 90 \\ +\ 1080 \\ \hline 1170 \end{array}$$

$\therefore 18 \times 0.65 = 11.70$

Ans: 11.70

12)

$$\begin{array}{r} 26 \\ \times\ 0415 \\ \hline 130 \\ 260 \\ 10400 \\ \hline 10790 \end{array}$$

$\therefore 26 \times 0.415 = 10.79$

Ans: 10.79

Ex-4:

1)

$$\begin{array}{r} 5.1 \\ 4.2 \\ \hline 102 \\ 2040 \\ \hline 2.142 \end{array}$$

In the given computation, there is an error in the product of the numbers in placing decimal point. The decimal point should be placed here between hundreds place and tens place of the product but the decimal point is found to be placed between thousand place and hundred place of the product. So the given computation is incorrect which can be rectified as under:

$$\begin{array}{r} 5.1 \\ \times\ 4.2 \\ \hline 102 \\ 2040 \\ \hline 21.42 \end{array}$$

$\therefore 5.1 \times 4.2 = 21.42$

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2)
$$\begin{array}{r} 0.2 \\ \times 0.17 \\ \hline 14 \\ 020 \\ \hline 0.34 \end{array}$$

in the given computation, there is an error in placing decimal point in the product of the numbers. Actually, decimal point should be placed between hundred placed and thousand place of the product of the numbers but decimal point has been placed on the left of tens place of the product. So, computation can be rectified as under:

$$\begin{array}{r} 02 \\ \times 017 \\ \hline 14 \\ +20 \\ \hline 0.034 \end{array}$$

$\therefore 0.2 \times 0.17 = 0.034$

3)
$$\begin{array}{r} 0.3 \\ \times 0.62 \\ \hline 60 \\ 180 \\ \hline 0.240 \end{array}$$

The product of the two numbers is not correct. The correct computation of the given sum can be done as under:

$$\begin{array}{r} 03 \\ 062 \\ \hline 00 \\ 180 \\ \hline 0186 \end{array}$$

$\therefore 0.3 \times 0.62 = 0.186$

Ex-1: weight ÷ length = weight per metre

$\therefore 12 \div 3 = 4Kg$

$\therefore$ Weight per ~~p~~metre of iron bar A = 4Kg

Ex-2: Weight ÷ length = weight per metre

$\therefore 12Kg \div 2.4m = 12 \div 2.4$ ~~me~~ Kg

$= 12 \div \frac{24}{10}$ Kg

$= \cancel{12} \times \frac{\cancel{10}^{5}}{\cancel{24}_{\cancel{2}}}$ Kg $= 5Kg$

$\therefore$ Weight per metre of iron ~~2~~ bar B = 5Kg.

or, Here, total length of wire = 2.4m

Total weight of wire = 12Kg

$\therefore$ weight of 1 metre $= 12 \div 2.4$ Kg

$= 12 \div \frac{24}{10}$ Kg

$= \cancel{12} \times \frac{\cancel{10}^{5}}{\cancel{24}_{\cancel{2}}}$ Kg

$= 5$ Kg.

Ans: Weight per metre of iron bar B is 5Kg.

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Ex-1: Fill in the blanks:

1) $3 \div 1.5 = (3 \div 15) \times \underline{10} = \left(\cancel{3} \times \frac{1}{\cancel{15}_{5}}\right) \times 10 = \frac{1}{\cancel{5}} \times \cancel{10}^{2} = 2$

2) $18 \div 1.2 = (18 \div 12) \times \underline{10} = \left(\cancel{18}^{3} \times \frac{1}{\cancel{12}_{2}}\right) \times 10 = \frac{3}{\cancel{2}} \times \cancel{10}^{5} = 15$

3) $5 \div 0.25 = (5 \div 25) \times \underline{100} = \left(\cancel{5}^{1} \times \frac{1}{\cancel{25}_{5}}\right) \times 100 = \frac{1}{\cancel{5}} \times \cancel{100}^{20} = 20$

4) $2 \div 0.125 = (2 \div 125) \times 1000 = \left(2 \times \frac{1}{125}\right) \times 1000 = \frac{2 \times 1 \times \cancel{1000}^{\cancel{200}^{\cancel{40}^{8}}}}{\cancel{125}_{\cancel{25}_{\cancel{5}}}} = 8 \times 2 = 16$

Ex-2: Length of iron bar = 0.8 metre
Weight of iron bar = 12 Kg

According to Reza's idea,
'8 metre is 8 unit of 0.1 metre
∴ Weight of 0.1 metre of iron bar C is weight of $\frac{1}{8}$ part of weight of 12 Kg.

that is $12 \div 8 = 1.5$ Kg

$$\begin{array}{r} 8)\ 12\ (1.5 \\ -8 \\ \hline 40 \\ -40 \\ \hline 0 \end{array}$$

∴ 1 metre of iron bar weight
= 10 times of weight of 0.1 metre

that is weight of 1 metre = 1.5 Kg × 10 = 15 Kg

Ans: 15 Kg per metre.

Or

According to Mina's idea:
Weight of 8 metre of iron bar C is 10 times of weight of 0.8 metre of the iron bar.

Weight of 8 metre of the iron bar = 12 Kg × 10
= 120 Kg

so weight of 1 metre of iron bar = 120 Kg ÷ 8
= 15 Kg

Ans: 15 Kg per metre.

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