

MATHEMATICS NOTES FOR 5TH CLASS (FOR KHYBER PAKHTUNKHWA)

Perimeter of rectangle=42cm $2(L+W)=42$ $\frac{2(15+W)}{2} = \frac{42}{2}$ $15+W=21$ $15+15+W=21+15$ $W=6\text{cm}$	$\frac{4 \times L}{4} = \frac{40}{4}$ $L=10$ So, length of carom board = $L=10\text{cm}$ Area of carom board = $L \times L$ $=10 \times 10$ Area of carom board = 100cm^2
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Unit: 9

**Data Handling
Exercise No: 1**

Q1: Find the average of the following .

(a) 4, 13, 25, 32, 42, 52 $\text{Average} = \frac{\text{Sum of quantities}}{\text{Number of quantities}}$ $\text{Sol} = \frac{4+13+25+32+42+52}{6}$ $= \frac{168}{6}$ Average = 28	(b) 12 kg, 16 kg, 26kg, 42 kg $\text{Sol: Average} = \frac{\text{Sum of quantities}}{\text{Number of quantities}}$ $\frac{12\text{kg}+16\text{kg}+26\text{kg}+42\text{kg}}{4}$ $= \frac{96}{4}$ Average = 24kg
(c) 10cm, 13cm, 17cm, 16cm, 9cm Sol: $\text{Average} = \frac{\text{Sum of quantities}}{\text{Number of quantities}}$ $\frac{10\text{cm}+13\text{cm}+17\text{cm}+16\text{cm}+9\text{cm}}{5}$ $= \frac{75}{5}$ Average = 15 cm	(d) 5ℓ, 15 ℓ, 30 ℓ, 35 ℓ, 40 ℓ $\text{Sol: Average} = \frac{\text{Sum of quantities}}{\text{Number of quantities}}$ $\frac{5\ell+15\ell+30\ell+35\ell+40\ell}{5}$ $= \frac{115}{5}$ Average = 23

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2. Marwa recites 9, 11, 12, 10 and 8 a'yah of the Holy Quran in 5 days respectively. Find the average number of a'yah she recites in one day.

Marwa recites A'yah in 5 days = 9, 11, 12, 10 and 8

Average A'yah in one day =

$$\frac{\text{Sum of A'yah}}{\text{Number of days}}$$

$$= \frac{9+11+12+10+8}{5} = \frac{50}{5}$$

Average of A'yah is one day = 10 A'yah

3. Saad has 16, Amna has 20, Sara has 15 and Ahmad has 9 pencils. Find the average number of pencils.

: Saad has pencils = 16

Amna has pencils = 20

Sara has pencils = 15

Ahamd has pencils = 9

Average number of

$$\text{pencils} = \frac{\text{Sum of Pencils}}{\text{Number of Pencils}}$$

$$= \frac{16+20+15+9}{4} = \frac{60}{4}$$

Average number of pencils = 15

4. The average number of students in 18 schools situated in a city is 1150. Find the total number of students in these schools altogether.

Q4: Total number of students = ?

Total number of schools = 18

$$\frac{\text{Total number of students}}{\text{Total number of school}} = 1150$$

$$= \frac{\text{Total number of students}}{18} = 1150$$

$$18 \times \frac{\text{Total number of students}}{18} = 18 \times 1150$$

Total number of students = 20700

5. On an average, Maryam baked 27 cakes for a bakery in 11 months. What is the total number of cakes that she baked?

Sol: Total number of cakes = ?

Total number of months = 11

Average cakes = 27

$$= \frac{\text{Total number of cakes}}{\text{Total number of months}} = 27$$

$$= \frac{\text{Total number of cakes}}{11} = 27$$

$$= 11 \times \frac{\text{Total number of students}}{11} = 11 \times 27$$

= Total number of cakes = 297

6. A factory hired a total of 1240 labourers in 4 years. Find the average number of laborers hired in a year.

Total number of labourers = 1240

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Total number of years=4

$$\text{Average} = \frac{\text{Total number of laboures}}{\text{Total number of years}} = \frac{1240}{4} \quad \text{Average} = 310$$

7. The runs scored by the students of a class in a cricket match are given below. Find the average runs of the students.

Students	Aimen	Haniya	Marwa	Sara	Nadia	Saba	Amna
Runs	21	52	54	33	37	47	28

Find the average runs of the students.

Average runs=

Sum of all runs

Numbers of players

$$= \frac{21 + 52 + 54 + 33 + 37 + 47 + 28}{7}$$

$$= \frac{272}{7} \quad \text{Average runs} = 38.85$$

$$\begin{array}{r} 38.85 \\ 7 \overline{) 272.00} \\ \underline{-21} \\ 62 \\ \underline{-56} \\ 60 \\ \underline{-56} \\ 40 \\ \underline{-35} \\ 5 \end{array}$$

Exercise No: 2

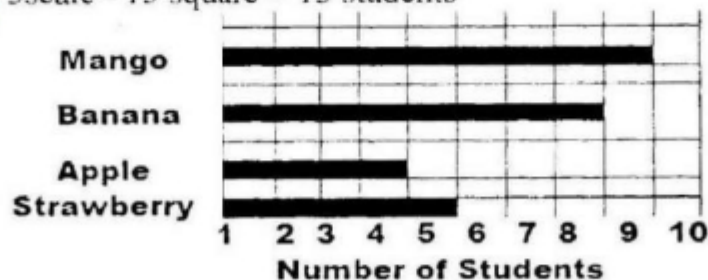
1. Farwa asked about the most favourite fruit of each student in her class.

The details of the answers given are shown in the table. Draw a horizontal bar graph of this data.

Favourite Fruit	Strawberry	Apple	Banana	Mango
Number of Students	5	4	8	9

The Horizontal bar graph of the given data.

Scale= 15 square = 15 students



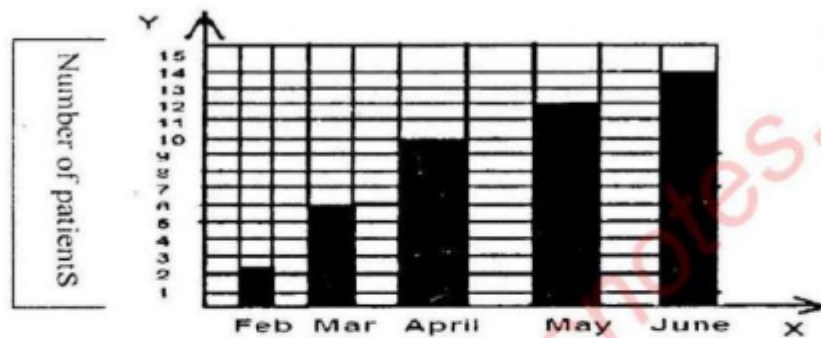
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Q2: The statistics of patients visiting a hospital during 5 months is given below. Draw a vertical bar graph of the given data.

Months	February	March	April	May	June
Number of Patients	2	6	10	12	15

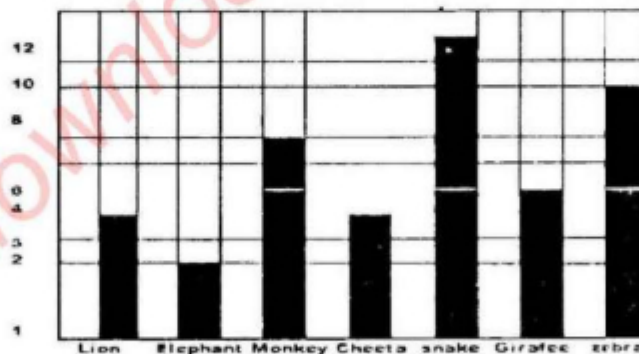
Ans: The vertical bar graph of the given data.

scale : 1 square = 1 patient



3. During a visit to a zoo the children saw different number of animals whose detail is given below. Draw its vertical bar graph.

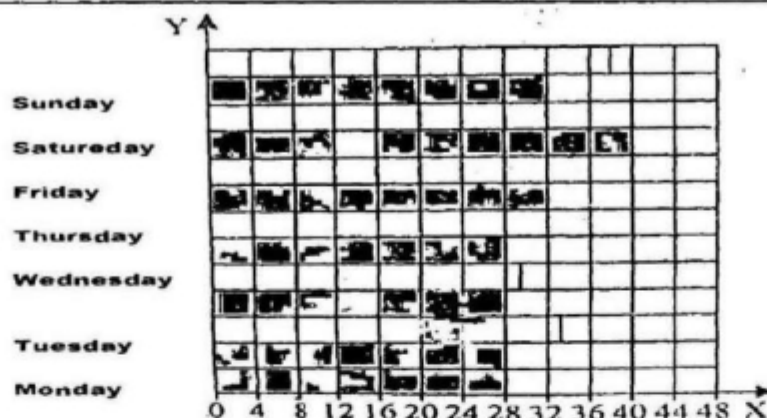
Animals	Lion	Elephant	Monkey	Cheeta	Snake	Giraffe	Zebra
Number of animals	4	2	8	3	12	6	10



4. In the following table the values of temperature in Lahore during a week of August are given. Draw a horizontal bar graph.

Days of Week	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Temperature	32	33	30	32	36	40	38

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5. Study the graph carefully to answer the given questions.

- How many students come to school by car?
- Is the number of students coming to school on motorcycle less than those coming by rikshaww? If yes, then how much less?
- Which means of transport do most students use and what is the number of students coming to school by this means?
- What is the total number of students coming by car, rikshaw and bus altogether?
- Tell the number of students coming to school on foot.

(5) (a) From the given graph 7 students come to school by car.

(b) Yes

Number of students come by riksha = 60

Number of students come by motorcycle = 20

Difference = 40

So, 40 students are less come by motorcycle.

© Mostly students come by bus and they are 10 students.

(d) Number of students come by car = 70

Number of students come by rikshaw = 60

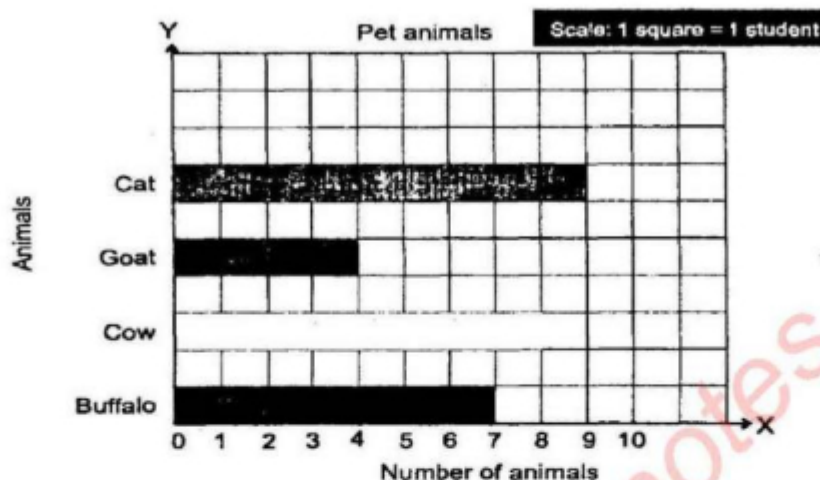
Number of students come by buss = 100

Total = 230

(e) Number of students come by foot=80

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Q6: Study the bar graph carefully to answer the given questions.



- (a) 9 student have cat as a pet.
 (b) 4 students have goat as a pet.
 (c) According to the graph cat is more popular pet.
 (d) Number of students have cat as a pet = 9
 Number of students have goat as a pet = 4
 Number of students have cow as a pet = 8
 Number of students have buffalo as a pet = 7
 Total student have pet at home = 28
 (e) Total students in class = 35
 Total students have pet at home = 28
 Students do not have pets at home = 7

Review Exercise

Q1: Circle the best option.

- (a) The average of a number of items can be found by ____
 (i) Dividing sum of items by number of items.
 (ii) Adding sum of items and number of items.
 (iii) Multiplying sum of items by number of items.
 (iv) Subtract sum of items from number of items.
 (b) If a student got 19, 21, 22, 24 and 19 marks in different subjects

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in the monthly test, his average number will be 21

(i)19 **(ii)21** (iii)22 (iv)25

(c) To find the sum of some values whose average is known, the following formula is used _____

(i) Sum of items = average of items + Number of items.

(ii) Sum of items = average of items - Number of items.

(iii) Sum of items = average of items x Number of items.

$$\text{Sum of items} = \frac{\text{Average of items}}{\text{number of items}}$$

(d) If the sum of some quantities is 600 and the average is 50 then number of quantities will be 12.

(i)15 **(ii)12** (10) (iv)5

(e) Ahmad jumped 12 times in a minute, 9 times in second minute and 15 times in third minute. Will be the average of number jumps Ahmad did?

(i)9 (ii)11 **(iii)12** (iv) 215

2. A labourer earned Rs. 1200 on the first day, Rs.1000 on the second day, Rs. 1500 on the third day, Rs. 1300 on the fourth day and Rs. 1200 on the fifth day. Find out how many rupees he earned on average in five days?

Earned on first day = 1200

Earned on second day = 1000

Earned on third day = 1500

Earned on fourth day = 1300

Earned on fifth day = 1200

$$\text{Average} = \frac{\text{Total rapers earned}}{\text{number of days}}$$

$$= \frac{1200+1000+1500+1300+1200}{5} = \frac{6200}{5} =$$

$$\text{Average} = 1240 \text{ Rs.}$$

3. Find out the average of six odd numbers from 1 to 11, and also find the average of six even numbers from 2 to 12. Tell which of these two average is greater in value, the even one or odd one?

Six odd number from 1 to 11 = 1, 3, 5, 7, 9, 11

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Average of six odd numbers = $\frac{\text{Sum of odd Nos}}{\text{Number of odd Nos}}$

$$= \frac{1+3+5+7+9+11}{6} = \frac{36}{6}$$

Average of first six odd Numbers = 6

Six even number from 2 to 12 = 2 . 4 . 6 . 8 . 10 . 12

Average of first six even Nos = $\frac{\text{Sum of even Nos}}{\text{Number of even Nos}}$

$$= \frac{2+4+6+8+10+12}{6} = \frac{42}{6}$$

Average of first six even Numbers = 7

So, even numbers have greater average.

4. A pharmacy earned a profit of Rs. 50000 in the first month, Rs. 62000 in the second month, Rs. 68000 in the third month, Rs. 78000 in the fourth month and Rs. 65000 in the fifth month. Draw a vertical bar graph of the profit of the company for the five months.

Earned profit in first month = 50000

Earned profit in 2nd months = 62000

Earned profit in 3rd months = 68000

Earned profit in 4th month = 78000

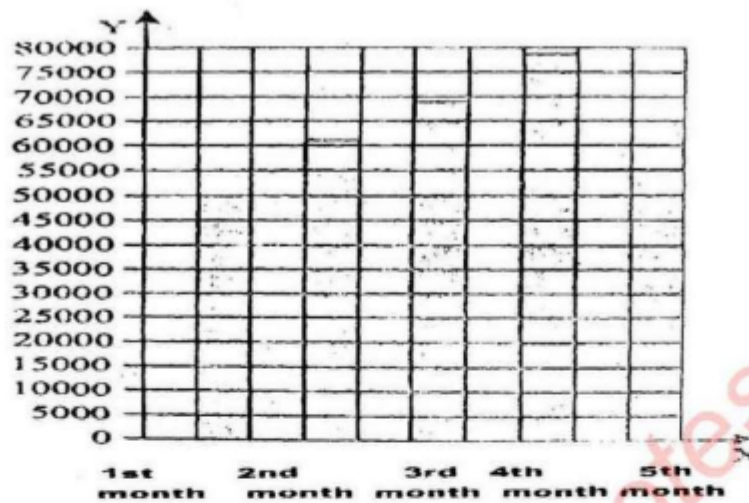
Earned profit in 5th month = 65000

Average profit = $\frac{\text{Total profit}}{\text{Number of months}}$

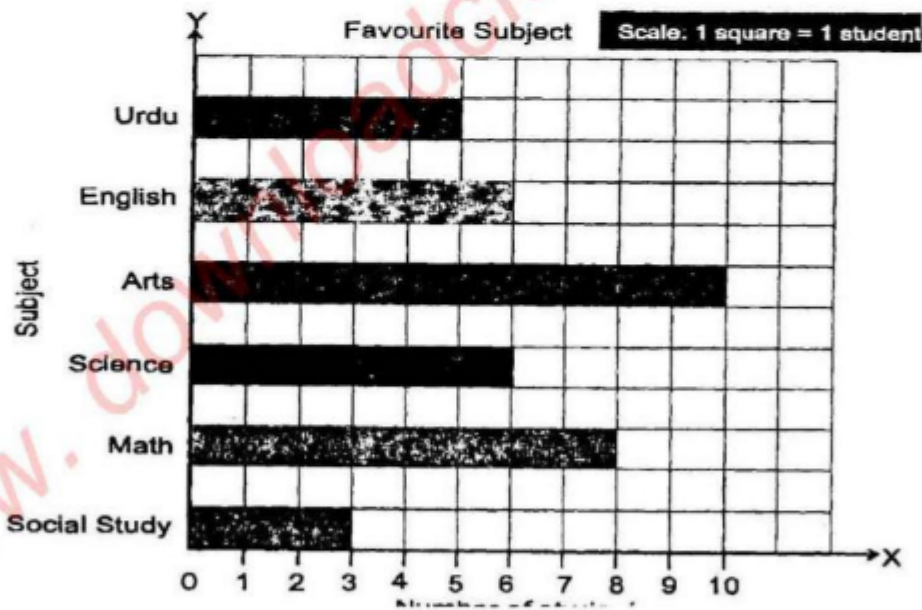
$$= \frac{50000+62000+68000+78000+65000}{5} = \frac{323000}{5}$$

Average profit = 64,600

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5. Fifth graders were asked to vote for their most favourite subjects. The following bar graph shows their responses. Read the graph carefully to answer the given questions.



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- =====
- a) A total of how many students chose Science and Mathematics?
b) How many students choose Arts?
c) How many more students choose Math than Science as their favorite subject?
d) Which subjects are liked by the same number of students and what is their number?
e) Study the graph to find out the total number of students in grade 5.
f) Tell the most favorite and the least favorite subject of grade 5 students.

(a) Number of students choose science = 6
Number of students choose mathematics + = 8
Total number of students choose science and maths = 14

(b) Number of students choose Arts = 10

(c) Number of students choose maths = 8
Number of students chose science - = 6
Difference = 2

(d) English and science are liked by same number of students and both are 6 students.

(e) Number of students choose Urdu = 5
Number of students choose English = 6
Number of students choose Arts = 10
Number of students choose Science = 6
Number of students choose maths = 8
Number of students choose social study = 3
Total number of students = 38

(f) The most favorite subjects of grades is Arts which is choose by 10 students.

The least favorite subject of grade 5 is social study which is chosen by 3 students.

