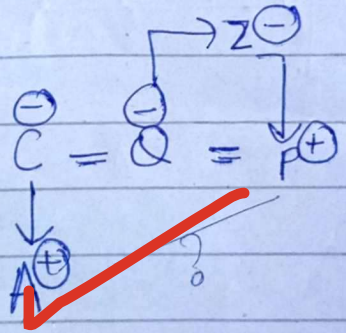
Blood Relations.

Sex → (+), (−)
Male, Female

Siblings → =
Spouse → +
Profession ( )

Q. A is the son of C, while C and Q are sisters to one another, Z is the mother of Q. If P is son of Z, what is the relation b/w P and A?

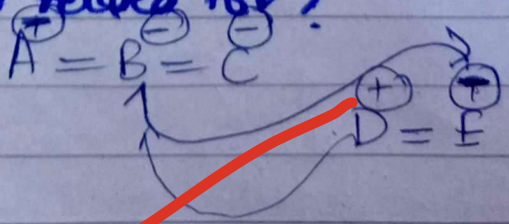


3.5

discuss in the form of statements as well.

Ans Maternal uncle
P is the maternal uncle of A &
A is nephew of P.

Q A, B, C are sisters. D is the brother of E and E is the daughter of B. How is A related to D?

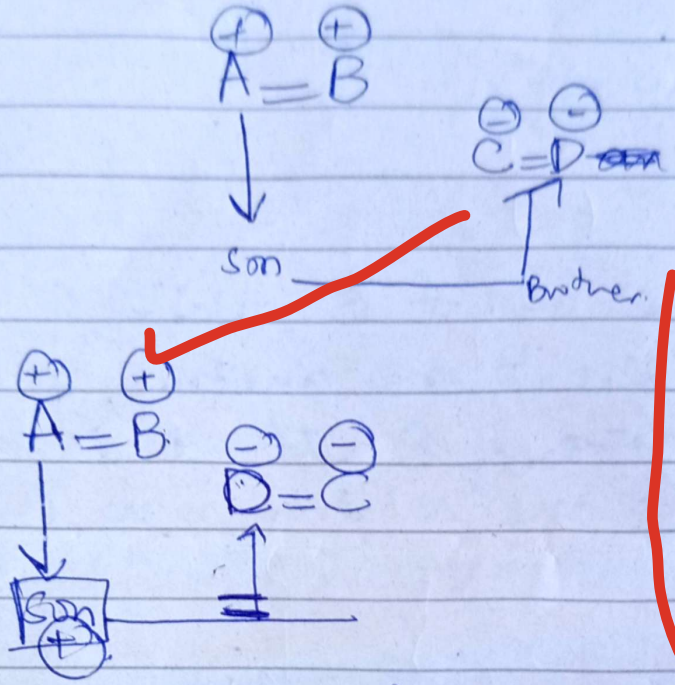


Maternal Aunt.

3

write the final answer in the form of statement as well....

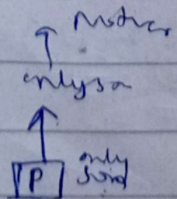
Q A and B are brothers. C and D are sisters. A's son is D's brother. How is B related to C?



If A's son is D's brother, so D's is also daughter of A.

Paternal uncle

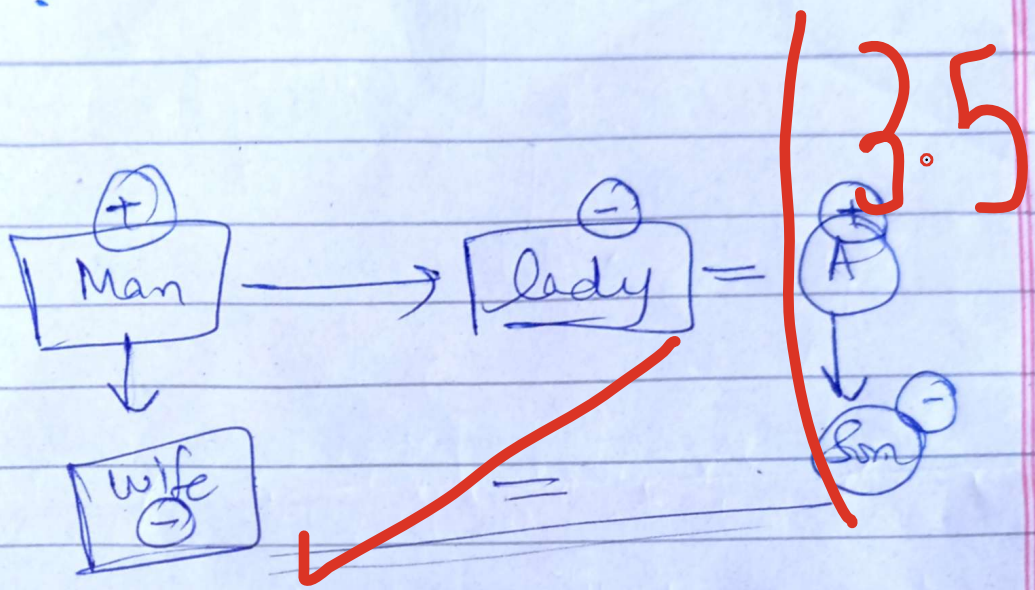
Q Pointing to a photograph of a boy Mr. Surab said. "He is the son of only son of my mother." How is Mr. Surab related to that boy?



Mr. Surab relation to lady = Son

As given in ques, Mother has only son so, Mr. Surab is the son. 2ndly, Son

A man said to a lady, "The son of your brother is the brother of my wife. What is lady to the man?



3.5

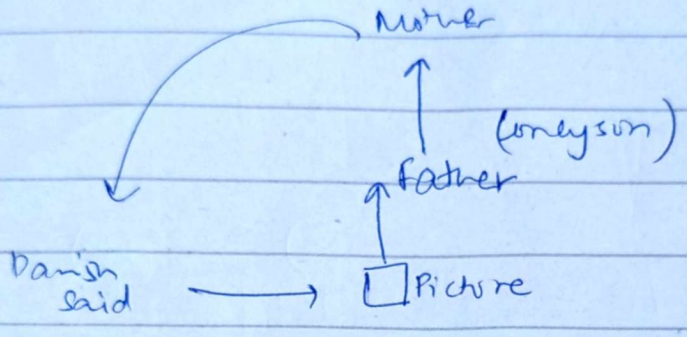
سسر کی بہن ⟵ ساس

Father-in-law → sister

3

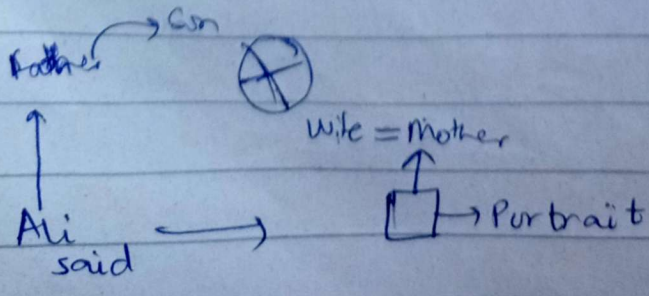
attempt and upload a single qs at a time for evaluation.....

1) Pointing at a photo, Danish said, "His father is the only son of my mother." The photo belongs to?



Since Danish's mother has only one son, and Danish is also son. So, they are talking about Danish. Hence, the person in the picture is Danish's Son.

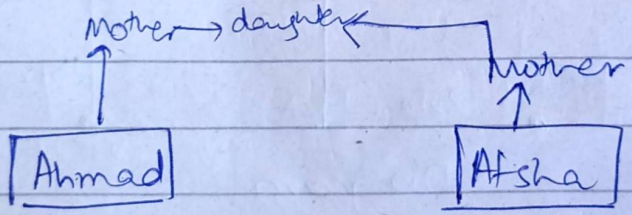
2- Looking at a portrait of a man, Ali said, "His mother is the wife of my father's son. Brother and sisters I have none." At whose portrait was Ali looking?



Ali was looking at a portrait of his own son.

Explanation: As, Ali ~~is father has~~ ~~no~~ is the only child of his father. So, the woman which is the mother of portrait's person is the wife of Ali. Hence, Ali is the father of that portrait person.

Q If Ahmad says, "Afsha's mother is the only daughter of my mother." how is Ahmad related to Afsha?

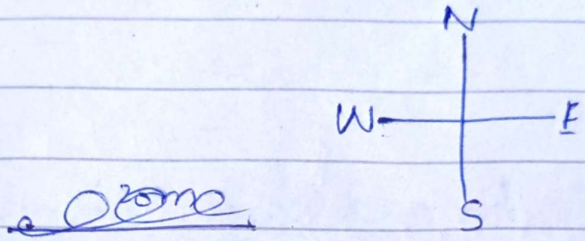


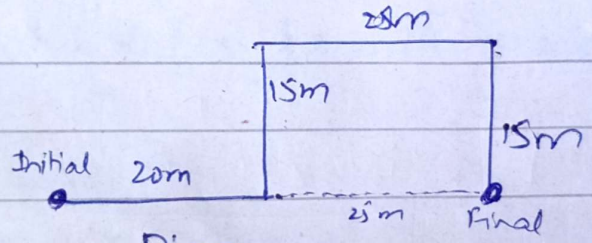
Explanation: Afsha's mother is sister of Ahmad. So, Ahmad is maternal uncle of Afsha.

Direction Sensing

If Rahim moves 20m in East direction and then turn to his left and then moves 15m and then turns to his right and moves 25m. After this he turns to his right and moves 15m.

1) In which direction he is moving?
2) Total travelling path covered?
3) How far is he from initial position?

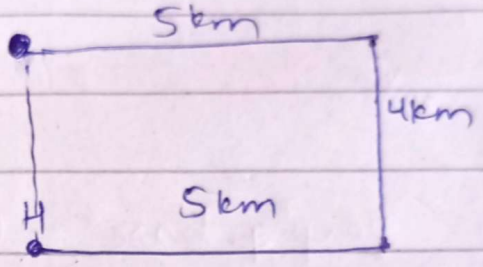




Diagram

1) Southward direction
2) Total travelling = 20 + 15 + 25 + 15 = 75m
3) Displacement = Final + Initial
   = 25 + 20
   = 45m

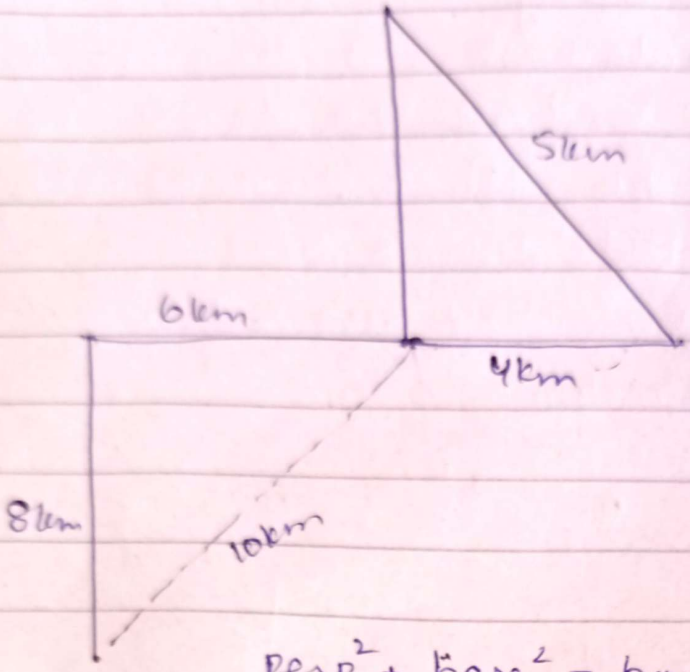
2- A man starting from his home walks 5km towards East, and then he turns left and goes 4km. At last he turns to his left and walks 5km. Now ~~turn~~ Find distance b/w man and his home and also find in which direction?



Distance b/w man & home = 4km.

Direction he is walking = North of his home.

3- A man travels over path of a right-angle triangle having base and hypotenuse 4 and 5 km, respectively. After a complete round he continues in same direction for 6km and turns 90 degrees and continues for another 8 km. How long he has travelled and how far he is from his starting point?



$perp^2 + base^2 = hyp^2$

$perp^2 = hyp^2 - base^2$

$= 5^2 - 4^2$

$= 25 - 16$

$\sqrt{perp^2} = \sqrt{9}$

perpendicular = 3km

$hyp^2 = perp^2 + base^2$

$= 8^2 + 6^2$

$= 64 + 36$

$\sqrt{hyp^2} = \sqrt{100}$

hyp = 10km

1) He is 10km far from his starting point.

2) Total distance covered = 5+4+6+8+3

= 26km

Maths

⇒ Percentage / Profit / Loss

a) 144 is what percent of 360?

$$= \frac{144}{360} \times 100\% = \frac{40}{100}$$

$$= \boxed{40\%}$$

b) 30 is 20% of what number?

$$20\% = \frac{30}{\text{Total}}$$

$$\frac{20}{100} = \frac{30}{\text{Total}}$$

$$\text{Total} = \frac{30 \times 100}{20} = \boxed{150}$$

c) 77 is what percent of 140?

$$= \frac{77}{140} \times 100\%$$

$$= \boxed{55\%}$$

d) 25% of a number is 300. Then number is?

$$25\% = \frac{300}{\text{Total}}$$

$$\frac{25}{100} = \frac{300}{\text{Total}}$$

$$\text{Total} = \frac{300 \times 100^{4}}{25_{1}}$$

$$\boxed{\text{Total} = 1200}$$

e) Evaluate: 15% of 80% of 90?

Method 1:-

$$= \frac{15^{3}}{100_{20_{5}}} \times \frac{80^{4}}{100} \times 90$$

$$= \frac{54}{5}$$

$$= \boxed{10.8}$$

Method 2:-

$$= 80\% \text{ of } 90$$

$$= \frac{80}{100} \times 90$$

$$= 72$$

$$= 15\% \text{ of } 72$$

$= 15\%$ of 72

$= \frac{15}{100} \times 72$

$= \frac{3 \times 36}{5}$

$= \frac{54}{5} = \boxed{10.8}$

f) What percent is 250 g of 1 kg?

1 kg = 1000 g

Percentage = ?

$\text{Percentage} = \frac{250}{1000} \times 100$

$= \frac{1}{4} \times 100$

$= \boxed{0.25} \times 100$

$= \boxed{25\%}$

The candidates contested an election and received 1000, 5000, 10,000 votes respectively. What is percentage of total votes the winning candidates gets?

Total votes = 1000 + 5000 + 10,000

= 16000

% of candidate 1 = $\frac{1000}{16000} \times 100$

= 6.25 %

% of candidate 2 = $\frac{5000}{16000} \times 100$

= 31.25 %

% of candidate 3 = $\frac{10,000}{16000} \times 100$

= 62.5 %

So, Percentage of total votes of winning candidate is **62.5 %**.

The income of a company decreased by 10% and 15% in two successive years. What is the percentage of decrease in income after 2 years?

Let income = 100

So, 10% decrease of 100 will be:

$$10\% \text{ is } = \frac{10}{100} \times 100$$

$$= 10$$

So, $100 - 10 = \boxed{90}$

15% Decrease in income in 2nd year $= \frac{15}{100} \times 90$

$$= 13.5$$

$$90 - 13.5 = \boxed{76.5}$$

After 2 years ↑ decrease in income will be =

$$= 100 - 76.5$$

$$= \boxed{23.5\%}$$

Time Frame

1- A man's income is Rs-8400/day. Given that his original income was 7500/day, find the %age increase in his daily income?

Previous Income of man = 7500/day

Present Income of man = 8400/day.

$$\text{Percentage increase} = \frac{\text{New} - \text{old}}{\text{old}} \times 100$$

$$= \frac{8400 - 7500}{7500} \times 100$$

$$= \frac{900}{7500} \times 100$$

$$= \frac{900}{75} \quad 12$$

$$= \boxed{12\%}$$

2- A primary school had an enrollment of 850 students in 2020. In 2022, enrollment was 1120. What was the percentage ↑se in enrollment?

Enrollment in 2020 = 850 students
Enrollment in 2022 = 1120 students
Percent increase = ?

$$\uparrow se \text{ in percent} = \frac{New - old}{old} \times 100$$

$$= \frac{1120 - 850}{850} \times 100$$

$$= \frac{270}{\cancel{850}_{17}} \times \cancel{100}^{2}$$

$$= \boxed{31.76\%}$$

3- The enrollment in a certain school was 450 in 2015. By 2016, the enrollment had ↑se by 16%. What was the enrollment in 2016?

Method 1:-

Enrollment in 2015 = 450 students
% increase in enrollment in 2016 = 16%

$$\%\uparrow \text{ in enrollment} = \frac{New - old}{old}$$

$$16\% = \frac{New - 450}{450}$$

$$\frac{16}{100} = \frac{\text{New} - 450}{450}$$

$$\frac{16}{100} \times 450 = \text{New} - 450$$

$$72 = \text{New} - 450$$

$$72 + 450 = \text{New}$$

$$522 = \text{New enrollment}$$

The enrollment in 2016 will be 522

Method 2 :-

Enrollment in 2015 = 450.

↑se by 16% in 2016 = $\frac{450}{100} \times 16$

$= 72$

So, add 72 in 450.

$= 72 + 450$

= 522 student enrolled in 2016.

⇒ Deduction/Increment

1- If 10% is deducted from bill, Rs-585 remains to be paid. How much is the bill?

Deduction = Total - % of Total = Payment

let Total = x

Deduction = x - % of x = Payment

Deduction = $x - 10\%$ of $x = 585$

$$= \frac{x}{1} - \frac{10}{100}x = 585$$

$$= \frac{100x - 10x}{100} = 585$$

$$= \frac{90x}{100} = 585$$

$$90x = 585 \times 100$$

$$x = \frac{585 \times 100}{90}$$

$$\boxed{\text{Total} = x = 650}$$

2- A boy scored 90 marks for his math test. This was 20% more than what he had scored for the English test. How much did he score in English?

Marks in Maths = 90

Maths marks = English + % of English

$90 = x + \%\text{ of } x$

$90 = x + 20\%\text{ of } x$

$90 = x + \frac{20}{100}x$

$90 = \frac{100x + 20x}{100}$

$90 = \frac{120x}{100}$

$\frac{90 \times 100}{120} = x$

$75 = x$

Marks in English = 75

A fruit seller had some items. He sells 40% items and still has 420 items. What is the total number of items he had originally?

Items sold = 40%.

Item still have = 420

Total number of items = ?

= Total − % of total = Items have

$= x - 40\%\ \text{of}\ x = 420$

$= \frac{x}{1} - \frac{40}{100} \times x = 420$

$= \frac{100x - 40x}{100} = 420$

$\frac{60x}{100} = 420$

$x = \frac{420 \times 100}{60}$

$x = 700$

Total number of item was 700.

Ali purchased a cycle for Rs.25,000/- .He spent Rs.5000 on its repairs, then sold it for Rs.33,000 .Find his gain in percent.

Cost of cycle = Rs.25000/-

Cost of repairing = Rs.5000/-

Total cost = 25000 + 5000

= 30,000/-

Selling price = Rs.33,000

$$\% \text{ Gain} = \frac{(S.P - C.P)}{(C.P)} \times 100$$

$$= \frac{(33,000 - 30,000)}{(30,000)} \times 100$$

$$= \frac{3000}{30,000} \times 100$$

$$\% \text{ Gain} = \frac{30}{3} = 10\%$$

11 oranges are bought for Rs.10 and 10 oranges are sold for Rs.11, find the gain/loss in percent.

Cost price of 11 oranges = Rs.10

Selling price of 10 oranges = Rs.11

Oranges	:	Price
11	:	10
10	:	11

Selling price = $11 \times 11 = 121$

Cost price = $10 \times 10 = 100$

$$\% \text{ Gain} = \left(\frac{SP - CP}{CP}\right) \times 100$$

$$= \left(\frac{121 - 100}{100}\right) \times 100$$

% Gain = 21 %.

An article costs Rs. 600. What should be the marked price of the article so that after 10% discount, the trader makes 20% profit?

Cost of article = Rs. 600

% Discount = 10%

Market price = ?

% Profit = 20%.

% Gain $= \frac{SP - CP}{CP} \times 100$

$20\% = \frac{SP - 600}{600}$

$\frac{20}{100} \times 600 = SP - 600$

$120 = SP - 600$

$120 + 600 = SP$

$720 = SP$

Selling price = Marked price − x % of M.P

$720 = M.P - \frac{10}{100} \times M.P$

$720 = \frac{x}{1} - \frac{10}{100} x$

$720 = \frac{100x - 10x}{100}$

$720 = \frac{90x}{100}$

$\frac{720}{90} \times 100 = x$

$8 \times 10 = x$

800/- = M.P

3- During a sale a clerk was putting a new price tags on each item. On one sweater, he accidently raised the price by 20% instead of lowering the price by 20%. As a result, price on the tag was 80, too high. What was original price of sweater?

20% increase = x + 20% of x

$= x + \frac{20}{100} x$

$= x + \frac{1}{5} x$

$= \frac{6}{5} x$

20% decrease = x − 20% of x

$= x - \frac{20}{100} x$

$= x - \frac{1}{5} x$

$= \frac{4}{5} x$

$N_2 - N_1 = 80$

$\frac{6}{5} x - \frac{4}{5} x = 80$

$\frac{6x - 4x}{5} = 80$

$\frac{2x}{5} = 80$

$x = \frac{80 \times 5}{2}$

$x = 200$

Ratio / Proportion

1- Ayesha collects apples in the basket. She picks about 6 apples each minute. Approximately how many apples she will collect in 10 min.

2- Cost of 3 dozen eggs is Rs. 720. What is cost of 5 eggs.

Ayesha picked = 6 apples/minute.

Apples collected in 10 minutes = 6×10

= 60 apples

Price of 3 dozen eggs = 720/-

~~Price of 1 dozen eggs = $\frac{720}{3}^{240}$~~

~~= 240/-~~

~~Price of 5 dozen eggs = 240×5~~

~~= 1200/-~~

1 dozen = 12 eggs.

Price of 36 eggs = 720

Price of 1 egg = $\frac{720}{36}^{20}$

Price of 5 eggs = 20×5

= 100/-

A car takes 3 ~~takes~~ hours 3 hours to cover distance of 360km. What distance will it cover in 40 mins?

Distance covered = 360 km in 3 hours

1 hour = 60 min

3 hours = 60 × 3 = 180 min

Distance covered in 180 min = 360 km

Distance covered in 1 min = $\frac{360 \text{ km}}{180 \text{ min}}$

= 2 km/min

Distance covered in 40 min = 2 × 40

= 80 km

Pakistan was given a target of 215 in T20 match, in response Pak scored with a run rate of 8.5 in powerplay. Find the required Run rate to gain target?

Total Target = 215

Total overs = 20

Run rate = $\frac{\text{score}}{\text{overs}}$

Run is scored in Powerplay (First 6 overs) = Run rate × overs.

= 8.5 × 6

= 51.

Remaining scores = 215 − 51

= 164 score

Remaining overs = 20 − 6

= 14 overs

Required Run rate = $\frac{\text{Score}}{\text{overs}} = \frac{164}{14}$

= 11.71

1- Ahmad's monthly income is 90,000/- while his expenditure is 65000/-.

a- Find ratio b/w income expenditure

b- Ratio b/w expenditure and saving

c- Ratio b/w saving and income.

Monthly Income = 90,000/-

Expenditure = 65000/-

Income : Expenditure

~~90,000~~ : ~~65000~~

18 : 13

Expenditure : Saving

65000 : 25000

13 : 5

Saving : Income

25000 : 90000

5 : 18

2- What is ratio of 4 inches to 8 feet?

1 Feet = 12 inches

8 Feet = 8 × 12 = 96 inches.

4 : 96 (24)

1 : 24.

3- The ratio of 250 mL and 8 L is?

1 L = 1000 mL

8 L = 8000 mL

250 : 8000 (160)

8 : 160

1 : 32

4- Find the mean proportion b/w 4 and 25?

$4 : x = x : 25$

$4 \times 25 = x^2$

$\sqrt{100} = \sqrt{x^2}$

$x = 10$

1- 20 pens cost 200/-, What will be cost of 35 pens?

Pens	:	Cost
20	:	200
35	:	x

$$\frac{20}{35} = \frac{200}{x}$$

$$\frac{35}{20} = \frac{x}{200}$$

$$\frac{200 \times 35}{20} = x$$

$$350 = x$$

2- Value of x in given proportion

$$1.6 : 1.2 = 2.4 : x$$

Product of extremes = Product of means

$$1.6 \times x = 1.2 \times 2.4$$

$$1.6x = 2.88$$

$$x = \frac{2.88}{1.6}$$

$$x = 1.8$$

In a cage containing 50 parrots, 10 are blue, 18 are green, and 22 are yellow. How many green parrots should be added to make the ratio b/w green and yellow parrots as 3:2?

Total parrots = 50

Blue = 10

Green = 18

Yellow = 22

Blue : Green : Yellow

10 : 18 : 22

5 : 9 : 11

Green : Yellow.

18 : 22

+15

33 : 22

3 : 2

Two numbers are respectively 20% and 50% more than a 3rd number. Find the ratio of the 1st and 2nd number.

$x + 20\%.x : x + 50\%.x : x$

$x + \frac{20}{100}x : x + \frac{50}{100}x : x$

$x + \frac{1}{5}x : x + \frac{1}{2}x : x$

$\frac{5x+1x}{5} : \frac{2x+1x}{2} : x$

$\frac{6x}{5} : \frac{3x}{2} : x$

1st and 2nd ratio

$\frac{6x}{5} : \frac{3x}{2}$

Multiply both by 10

$\frac{6}{5_1} x\cancel{10}^{2} : \frac{3}{\cancel{2}_1} x\cancel{10}^{5}$

$12 : 15$

Divide by 3

$\boxed{4 : 5}$

A worker can complete a task in 24 days. If three more workers join him, in how many days the same work will be completed?

Workers	:	Days
1 ↓	:	24 ↑
4	:	x

$$\frac{1}{4} = \frac{x}{24}$$

$$24 \times 1 = 4x$$

$$\frac{24}{4} = x = 6$$

Aslam types 200 words in 30 mins. How many words he will type in 12min?

Words	:	Minutes
200	:	30
x	:	12

$$\frac{x}{200} = \frac{12}{30}$$

$$x = \frac{12}{30} \times 200$$

$$x = 80$$

6 pipes are required to fill a tank in 1hr, 20 min. If we use 5 such types of pipes, how much time it will take to fill the tank?

1hr, 20 min = 60 + 20 = 80 min.

Pipes : Minutes

↑ 6 : 80 ↓↓

5 : x

$\frac{6}{5} = \frac{x}{80}$

$6 \times 80 = 5 \times x$

$\frac{6 \times 80^{96}}{5} = x$

$\frac{480}{5} = x$

$96 = x$

$$\begin{array}{r} 66.6 \\ 3\overline{)200} \\ -18 \\ \hline 20 \\ -18 \\ \hline 20 \\ -18 \\ \hline 2 \end{array}$$

$\frac{200}{3} = x$

$66.6 = x$

In a factory 5 men work for 8 hours to produce 200 products. If 8 men work for 6 hours then how many commodities will be manufactured?

$5 \times 8 = 40$ man-hour

Product produced per person. $= \frac{200}{40}$

$= 5$ product per person.

$8 \times 6 = 48$ man-hour

Product produced $= 48 \times 5$

$= 240$ products.

If 80kg of ration is sufficient for a family of 8 members for 40 days. Then for how many days, 100kg food will be sufficient for a family of 5 members?

Ration : Members : Days

$80 : 8 : 40$

$100 : 5 : x$

$\frac{80^{10^{1}}}{100_{20_{2}}} \times \frac{8^{1}}{8_{1}} = \frac{40}{x}$

$\frac{1}{2} \times \frac{40}{x}$

$80 = x$

A fort had enough provision of food for 300 soldiers for 90 days. After 20 days, 50 men left the fort. How long would the food last now at the same rate?

Soldiers	:	Days
300	:	90
250	:	x

$$\frac{250}{300} = \frac{70}{x}$$

$$250 \times x = 300 \times 70$$

$$x = \frac{300 \times 70}{250}$$

$$x = 84 \text{ days}$$

Shares

1- Share an amount of 840 b/w A and B in the ratio of 4:3.

Total = 4 + 3 = 7

$$\text{Share of A} = \frac{4}{7} \times \overset{120}{\cancel{840}}$$

$$= 480/-$$

$$\text{Share of B} = \frac{3}{7} \times \overset{120}{\cancel{840}} = 360/-$$

2- Share 150 kg into 9:4:2

Total = 9+4+2 = 15

Share of 1st = $\frac{9}{15_1} \times 150^{10}$

= 90 kg.

Share of 2nd = $\frac{4}{15_1} \times 150^{10}$

= 40 kg.

Share of 3rd = $\frac{2}{15_1} \times 150^{10}$

= 20 kg

3- Moiz and Mair share a lottery win of Rs. 2000 in the ratio of 1:4, Moiz then share his part between himself, his wife and his son in the ratio of 4:5:1, how much more his gets over his son?

Total Amount = Rs. 2000

Total ratio = 1+4 = 5

Moiz's share = $\frac{1}{5_1} \times 2000^{400}$

= 400/-

Mair is share = $\frac{4}{5} \times 2000$

= 1600/-

Total share = 4+5+1

= 10

Moiz 's share = $\frac{4}{10} \times 40$

= 16/-

Moiz 's wife share = $\frac{5}{10} \times 40$

= 20/-

Moiz's son share = $\frac{1}{10} \times 40$

= 4/-

4- Three persons start a business and spend 25,000, 15,000, and 40,000 respectively. Find the share of each out of a profit of 14,400 in a year.

Find the share:-

25000 : 15000 : 40000

25 : 15 : 40

5 : 3 : 8

Total ratio = 16

Share of Ist person = $\frac{5}{16} \times 14400$

= 4500/-

Share of 2nd person = $\frac{3}{16} \times 14400$

= 2700/-

Share of 3rd person = $\frac{8^1}{16_2} \times 14400$

= 7200/-

---

5. A and B started a business in partnership investing Rs. 20000 and Rs. 15000 respectively. After 6 months, C joined them with Rs. 20000. What will be B's share in total profit of Rs. 25000 earned at the end of 2 years from starting of business?

20,000 : 15,000 : 20,000

4 : 3 : 4

A's share = $\frac{4}{11} \times 25000$

A's share = 20,000 × 24

= 480000

B's share = 15000 × 24

= 360000

C's share = 20000 × 18

= 360000

480000 : 360000 : 360000

48 : 36 : 36

8 : 6 : 6

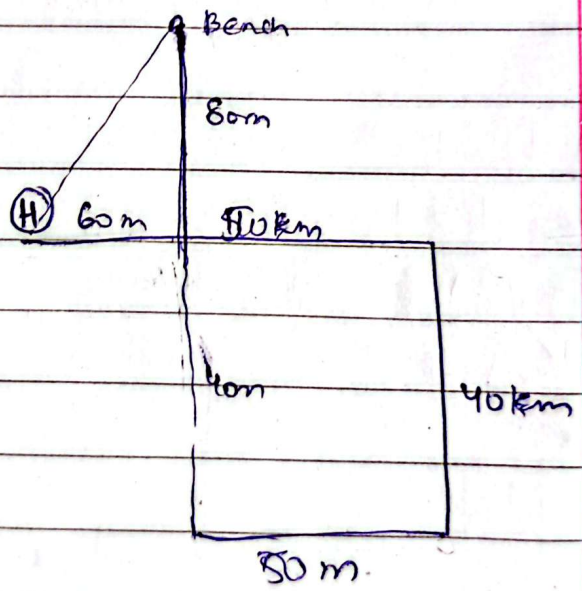
4 : 3 : 3

Share of B in

Profit $= \frac{3}{10} \times 2500$

$= 7500/-$

For his morning walk Aslam went 110m towards east from his house and then turned right to keep walking for 40m before turning right again. After continuing to walk for 50 m, he turned right again. and kept walking for another 120m, before he sat down on a bench at the park. How far was the bench located from his house?



$hyp^2 = per^2 + base^2$

$x^2 = 80^2 + 60^2$

$x^2 = 6400 + 3600$

$\sqrt{x^2} = \sqrt{10,000}$

$x = 100\ m$

Seating classification.

There are 5 boys sitting in a row in the college party. P is sitting to the left of M and to the right of O. R is sitting to the right of N but left to the O. Who is sitting in the middle?

N R O P M

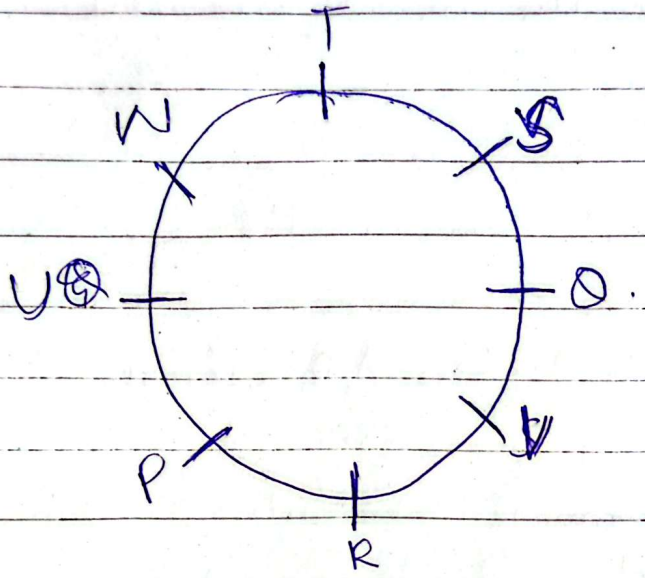
N R O P M.

O is in the middle.

Eleven students A, B, C, D, E, F, G, H, I, J & K. are sitting in a row facing towards a teacher. D is immediate left to F, is second right to C. A is second right to E, who is at the one end. J is neighbour of A and B third to left of G. H is on the left of D and third to the right of I. Who is in the middle, also draw table.

E K A J B I G C H D F

Eight friends P, Q, R, S, T, U, V & W are sitting on a circular table facing towards centre. Q is b/w V and S. W is sitting 3rd left to Q and second right to P. R is sitting b/w P and V. Q and T are not sitting in front of each other. Who is at the third left of S?



U is sitting third left to S

5 girls A, B, C, D, E and 4 boys W, X, Y, Z have to go on a trip in three cars. The following restrictions for seating in the car to be observed.

1- Only 3 persons can sit in one car.
2- Atleast one boy and one girl must be in each car.

3- A and D should remain together

4- Z cannot sit with B or C in the same car. Distribute boys and girls in three cars.

Total girls = 5 = ~~A, B, C, D, E~~

Total boys = 4 = ~~W, X, Y, Z~~.

Car 1 = W A D

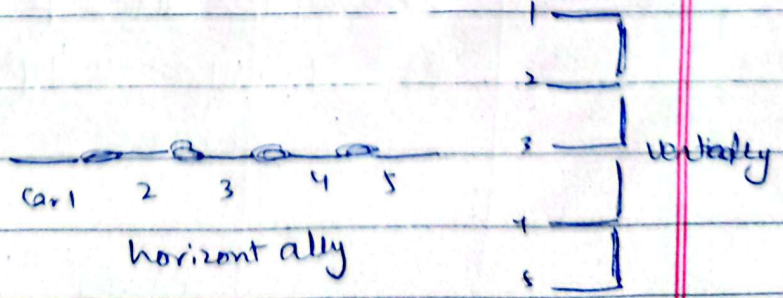
Car 2 = X B C

Car 3 = ~~Z~~ Y E

Q If Asif standing in a queue in such a way that he is 6th in the queue from either side, then how many people are standing in the queue?

Ans:- If Asif is 6th from left, there are 5 people to his left. If Asif is 6th from right, 5 people to right. Total = 5+5+1 = 11

Q If 5 cars are parked bumper to bumper, how many bumper are touching each other?



- Bumper of car 1 touches bumper of car 2
- Bumper of car 2 touches bumper of car 3
- Bumper of car 3 touches bumper of car 4
- Bumper of car 4 touches bumper of car 5.

Ans:

4 bumpers are touching each other.

Q Mushtaq, Pervaiz, Ehsan, Umair and Saleem are friends having different heights and weights. Mushtaq weights four times as much as Pervaiz and Pervaiz weight double than Ehsan Ehsan weights half as much as Umair and umair weight half as much as Saleem.

1)
2)
3)
4)
5)

let Pervaiz = P

Mushtaq = 4(Pervaiz)

Pervaiz = 2(Ehsan)

Ehsan = $\frac{1}{2}$(Umair)

Umair = $\frac{1}{2}$(Saleem)

let Perwaiz = 25 kg

Mushtaq = 4(P)

Mustaq = 4(25) = 100kg

Perwaiz = 2(Ehsan)

$\frac{25}{2}$ = Ehsan

12.5 kg = Ehsan

Ehsan = $\frac{1}{2}$ (Umair)

12.5 x 2 = Umair

25 kg = Umair

Umair = $\frac{1}{2}$ (saleem)

25 x 2 = Saleem

50kg = Saleem

1) Who is heaviest among them? Mushtaq
2) 2nd heaviest Saleem
3) lowest weight Ehsan
4) equal in weight Perwaiz and Umair
5) decending order M > S > P = U > E

Q Differentiate with examples b/w Pictogram & histogram?

Pictogram	Histogram
• The simplest form of data visualization.	• The most common form of data visualization
• uses pictures or icons to represent data.	• Uses contiguous vertical bars.
• Pictures arranged in single line.	• various height used represent the frequencies.

(ii) (e)

Boys 15 ☺☺☺

Girls 20 ☺☺☺☺

Q The teachers of a certain school were asked to indicate the average number of hours they spend on marking students assignments each day.

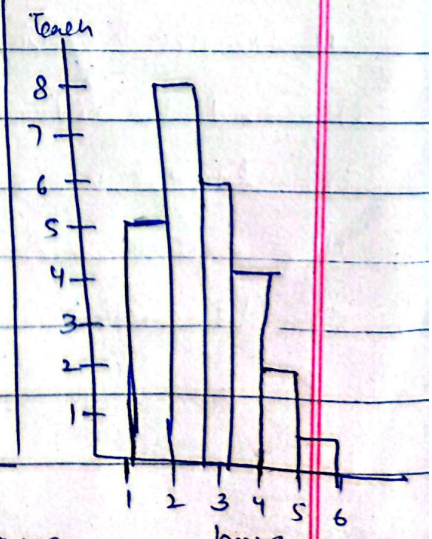
6 4 3 1 1/2 1/4

1 2 5 3 4 5 2 1/2 3

3 1 1/2 3 1 4 1/2

Construct a frequency table and histogram.

Hours	Teachers
1	5
2	8
3	6
4	4
5	2
6	1



Total teachers = 26

Most common = 2 hours