

Directions (1-5): Study the information and answer the given questions:

Eight persons S, T, U, V, W, X, Y, and Z lives on eight storey building with ground floor being numbered one and the next floor is number 2 and so on. They have their birth date on August, May, September, November, July, December, June, and October but not necessarily in same order.

S lives on even numbered floor above fourth floor. Two people lives between the floors on which S lives and the one who was born in July. Four people lives between the floors of U and X. U lives on even numbered floor above X. The person who was born in May lives on odd numbered floor above the one who born in July and below the floor upon which S lives. Number of people living between the one who born in July and S, is two more than the number of persons between the one who was born in May and U. T was not born in May. As many people live between the one who born in June and October same as between the one who born in May and person T. The person who was born in June lives on one of the floor above the one who born in October and lives on even number floor below 8th floor but not on 4th floor. Y lives on odd floor immediately above V. Four people lives between the one, who born in December and November. The person who born in December lives on one of the floors above the person who born in November. T lives immediately above Z. V was not born in August. The number of person who lives between U and the one born in October is less than 3.

Q1. S lives on which of the following floor?

- (a) First
- (b) Fifth
- (c) Seventh
- (d) Eight
- (e) None of these

Q2. T borns in which of the following month?

- (a) June
- (b) July
- (c) October
- (d) November
- (e) None of these

Q3. How many floor between Z and S?

- (a) Three
- (b) Four
- (c) Two
- (d) Five
- (e) None of these

Q4. V borns in which of the following month?

- (a) July
- (b) October
- (c) November
- (d) September
- (e) None of these

Q5. In some way S is related to W and Y is related to V, in the same way T is related to?

- (a) Z
- (b) Y
- (c) V

- (d) X
- (e) None of these

ANSWER :

8	S(December)
7	W(May)
6	U(June)
5	T(July)
4	Z(October)
3	Y(November)
2	V(September)
1	X(August)

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Q1. S lives on which of the following floor?

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- (c) Seventh
- (d) Eight
- (e) None of these

Q2. T borns in which of the following month?

- (a) June
- (b) July
- (c) October
- (d) November
- (e) None of these

Q3. How many floor between Z and S?

- (a) Three
- (b) Four
- (c) Two
- (d) Five
- (e) None of these

Q4. V borns in which of the following month?

- (a) July
- (b) October
- (c) November
- (d) September
- (e) None of these

Q5. In some way S is related to W and Y is related to V, in the same way T is related to?

- (a) Z
- (b) Y
- (c) V
- (d) X
- (e) None of these

S1. Ans.(d)

S2. Ans.(b)

S3. Ans.(a)

S4. Ans.(d)

S5. Ans.(a)

Directions (1-5): Study the information and answer the given questions:

Seven people P, Q, R, S, T, U and V live on separate floors of a 7-floor building. Ground floor is numbered 1, first floor is numbered 2 and so on until the topmost floor is numbered 7. Each one of them belongs to different countries viz. France, Japan, China, Fiji, Qatar, Germany and Australia but not necessarily in the same order. Only three people live above the floor on which P lives. Only one person lives between P and the one belongs to Germany. U lives immediately below the one who belongs to Japan. The one belongs to Japan lives on an even-numbered floor. Only three people live between the one who belongs to Germany and the one who belongs to China. T lives immediately above R. T does not belong to China. Only two people live between Q and the one who belongs to Qatar. The one who belongs to Qatar lives below the floor on which Q lives. The one who belongs to France does not live immediately above or immediately below the floor on which Q lives. S does not live immediately above or immediately below the floor on which P lives. V does not belong to Fiji.

Q1. Which of the following is true with respect to V as per the given information?

- (a) The one who lives immediately below V, belongs to Japan.
- (b) V lives on floor no. 7.
- (c) V lives immediately below T.
- (d) V lives on the lowermost floor.
- (e) V belongs to Germany.

Q2. Who among the following lives on floor no. 3?

- (a) The one who belongs to Fiji
- (b) The one who belongs to Qatar
- (c) R
- (d) V
- (e) T

Q3. Who lives on the floor immediately above T?

- (a) P
- (b) Q
- (c) S
- (d) V
- (e) U

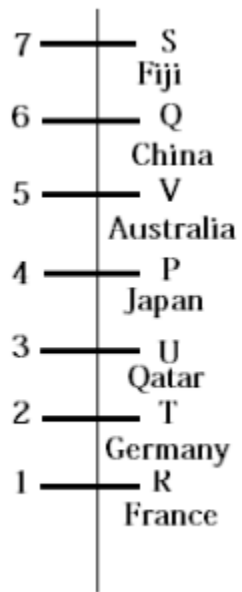
Q4. S belongs to which of the following Country?

- (a) Japan
- (b) Germany
- (c) China
- (d) Qatar
- (e) Fiji

Q5. How many people live between the floors on which S and the one who belongs to Japan?

- (a) None
- (b) Two
- (c) One
- (d) More than three
- (e) Three

Solution (1-5):



Directions (1-5): Read the following information carefully to answer the questions given below.

Seven Persons M, N, O, P, Q, R and S who all are staying in a seven storey building but not necessarily in the same order. The lowermost floor of the building is numbered 1, and the topmost floor is numbered 7. They all belongs to different states i.e. Haryana, Madhya Pradesh, Telangana, UP, Maharashtra, Rajasthan and Punjab but not necessarily in the same order. More than three persons lives above O. Only one person lives between O and P. Only three persons lives between the one who belongs to Madhya Pradesh and the one who belongs to Punjab, who lives on an odd numbered floor but below the one who belongs to Madhya Pradesh. O does not belong to Punjab. M belongs to Up and lives on the topmost floor of the building. More than three persons lives between M and the one who belongs to Rajasthan. Only one person lives between Q and R, who belongs to Telangana. P does not belong to Madhya Pradesh. The one who belongs to Haryana lives one of the floor above the one who belongs Maharashtra but not immediately above. Neither P nor R belongs to Maharashtra. N lives on one of the odd numbered floor above S.

Q1. Who among the following lives immediately below the one who belongs to Rajasthan?

- (a) M
- (b) The one who belongs to Telangana.
- (c) The one who belongs to Punjab.
- (d) P
- (e) both c and d

Q2. Who among the following belongs to Haryana?

- (a) Q
- (b) N
- (c) M
- (d) R
- (e) None of these

Q3. Who among the following lives on the 5th floor?

- (a) R
- (b) P
- (c) N
- (d) M
- (e) None of these

Q4. Who among the following belongs to Maharashtra?

- (a) S
- (b) P
- (c) N
- (d) O
- (e) None of these

Q5. Who among the following lives on 2nd Floor?

- (a) P
- (b) S
- (c) N
- (d) O
- (e) R

Solutions

1. Ans.(e)
2. Ans.(a)
3. Ans.(c)
4. Ans.(d)
5. Ans.(b)

FLOOR	PERSON	STATES
7	M	UP
6	Q	HARYANA
5	N	MADHYA PRADESH
4	R	TELANGAN
3	O	MAHARASHTRA
2	S	RAJASTHAN
1	P	PUNJAB

Directions (1-5): Study the following information carefully and answer the questions below:

There are seven players i.e. A, B, C, D, E, F and G who live in a seven storey building but not necessarily in same order lowermost floor of building is numbered 1, one above that is numbered 2 and so on till top most floor which is numbered 7. They all belongs to different team i.e. M, N, O, P, Q, R and S but not necessarily in the same order. They all play different games i.e. Cricket, Kho-Kho, Kabaddi, Hockey, Football and Rugby but not necessarily in the same Order. Cricket is played by two players.

E lives above the one who plays Rugby. F belongs to team Q and he lives on an even numbered floor below the floor of the one who belongs to team R. B plays Football. There are two players who plays cricket and both of them lives on an odd numbered floor. The player who plays Kho-Kho belongs to team S. G lives on an even numbered floor immediately above the one who plays Kabaddi. There are only three player's lives between the players who plays cricket. There are as many as floor above the one who plays Rugby as below him. E plays Hockey and lives immediately below the one who plays cricket. D plays Kabaddi and lives on a floor below the floor of the one who play's Rugby. B belongs to team N. F does not play Cricket. A lives above C and belongs to team M. D belongs to team P. C does not belongs to team S. G does not play Rugby.

Q1. Who among the following plays Rugby?

- (a) A
- (b) F
- (c) The one who belongs to team Q
- (d) C
- (e) Both (b) and (c)

Q2. Who among the following lives on 3rd floor?

- (a) A
- (b) B
- (c) E
- (d) C
- (e) None of these

Q3. The one plays Hockey lives on which floor?

- (a) 7th
- (b) 4th
- (c) 6th
- (d) 2nd
- (e) 3rd

Q4. The one who plays cricket belong to which team?

- (a) Team P
- (b) Team O
- (c) Team Q
- (d) Team R
- (e) Team S

Q5. If A is related to Football in the same way F is related to Kho-Kho then following the same pattern C is related to?

- (a) Kabaddi
- (b) Cricket
- (c) Rugby

- (d) Football
- (e) Hockey

Solutions(1-5):

FLOOR	PLAYER	TEAM	GAME
7	A	M	CRICKET
6	E	R	HOCKEY
5	B	N	FOOTBALL
4	F	Q	RUGBY
3	C	O	CRICKET
2	G	S	KHO-KHO
1	D	P	KABADDI

- 1.Ans.(e)
- 2.Ans.(d)
- 3.Ans.(c)
- 4.Ans.(b)
- 5.Ans.(a)

Direction (1-5): Study the following information carefully and answer the following questions given below.

The table shows the percentage of marks obtained by different students in different subjects

Subject	English	Hindi	Maths	Science	Social
Student					
Rima	70	80	92	95	74
Isha	65	58	78	82	80
Akansha	50	54	60	65	70
Sneha	72	62	76	72	58
Karan	58	50	59	46	60
Akash	84	85	90	90	60
Ishant	70	75	64	80	70

1) If maximum marks in Mathematics is 250, then what are the average marks scored by Rima, Isha, Akansha and Ishant together in mathematics?

- a) 183.75
- b) 120.75
- c) 184.5
- d) 165.75
- e) 155.25

2) If the marks scored by Rima in Hindi and Social sciences are 160 and 222 respectively, then what is the ratio of marks scored by Isha in Hindi to the marks scored by Akansha in Social sciences?

- a) 57: 105
- b) 54: 103
- c) 58: 105
- d) 61: 103

e) 63: 105

3) If total marks in English are 200, then what is the average of marks scored by all 7 given persons in English?

a) 124

b) 154

c) 157

d) 134

e) 121

4) Total marks scored by Rima and Akansha in Mathematics are what percent of total marks scored by Karan and Akash in science?

a) 110%

b) 113.23%

c) 122.25%

d) 109.50%

e) Data insufficient.

5) If maximum marks in Science and Mathematics are equal, then what is the ratio of total marks scored by all 7 students in Science to the total marks scored by all 7 students in Mathematics?

a) 537:519

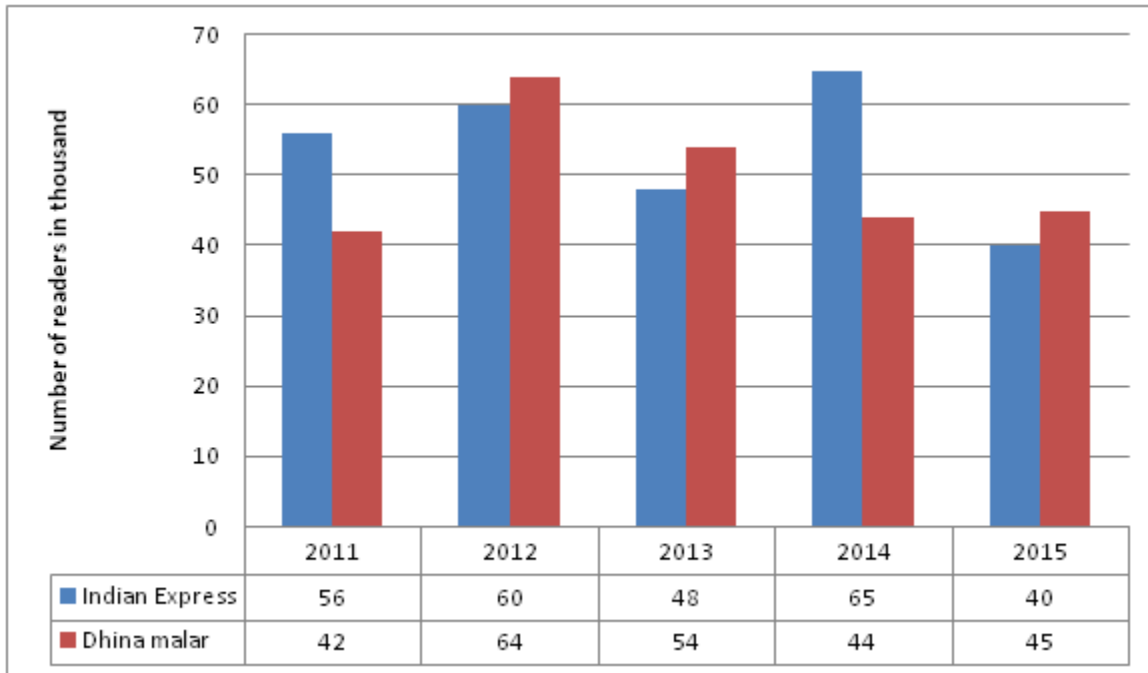
b) 530:523

c) 530:519

d) 523:511

e) 531:517

Directions (6-10): The following bar chart shows the total number of readers of newspaper Indian Express and Dhinamalar over the period of 2011 to 2015 and the table shows the percentage of female readers among them.



Years	Indian Express	Dhinamalar
	% Females	% Females
2011	43%	51%
2012	37%	45%
2013	45%	48%
2014	52%	54%
2015	39%	56%

6) What is the total number of female readers of newspaper Dhinamalar in the year 2014?

- a) 24670
- b) 33479
- c) 23760
- d) 43280
- e) 25210

7) What is the difference between the total male readers of newspaper Indian Express and its total female readers in the year 2011?

- a) 4570

b) 7840

c) 5670

d) 8280

e) 7560

8) What is the ratio of the total male readers of newspaper Indian Express in the year 2013 to the total female readers of newspaper Dhinamalar in the year 2015?

a) 22 : 21

b) 15: 22

c) 24: 13

d) 11 :43

e) 16: 15

9) What is the average number of male readers of newspaper Dhinamalar over the years?

a) 35470

b) 34650

c) 12460

d) 24780

e) 26760

10) The total number of female readers of newspaper Indian Express in the year 2012 is approximately what per cent of the total number of male readers of newspaper Dhinamalar in the year 2012?

a) 45%

b) 63%

c) 98%

d) 46%

e) 57%

Answers :

1). Answer: a)

Marks scored by Rima in Mathematics = $(92/100) * 250 = 230$

Marks scored by Isha in Mathematics = $(78/100) * 250 = 195$

Marks scored by Akansha in Mathematics = $(60/100) * 250 = 150$

Marks scored by Ishant in Mathematics = $(64/100) * 250 = 160$

Required average = $(230 + 195 + 150 + 160)/4 = (735/4) = 183.75$

2). Answer: c)

Let total marks in Hindi and Social sciences be H and S respectively.

Marks scored by Rima in Hindi = $(80/100) * H$

$160 = (80/100) * H$

$H = 200.$

Marks scored by Rima in Social sciences = $(74/100) * S$

$222 = (74/100) * S$

$S = 300.$

Marks scored by Isha in Hindi = $(58/100) * 200 = 116.$

Marks scored by Akansha in Social sciences = $(70/100) * 300 = 210.$

Required ratio = $(116/210) = 58/105$

3). Answer: d)

Marks scored by Rima in English = $(70/100) * 200 = 140$

Marks scored by Isha in English = $(65/100) * 200 = 130$

Marks scored by Akansha in English = $(50/100) * 200 = 100$

Marks scored by Sneha in English = $(72/100) * 200 = 144$

Marks scored by Karan in English = $(58/100) * 200 = 116$

Marks scored by Akash in English = $(84/100) * 200 = 168$

Marks scored by Ishant in English = $(70/100) * 200 = 140$

Required average = $(140 + 130 + 100 + 144 + 116 + 168 + 140)/7$

= $(938/7) = 134$.

4). Answer: e)

As maximum marks of Science and Mathematics are not given so answer cannot be determined.

5). Answer: c)

Let maximum marks in Science = Maximum marks in Mathematics = M

Total marks scored by all 7 students in Science

= $(95\% + 82\% + 65\% + 72\% + 46\% + 90\% + 80\%) * M$

= $(530\%) * M$

Total marks scored by all 7 students in Mathematics

= $(92\% + 78\% + 60\% + 76\% + 59\% + 90\% + 64\%) * M$

= $(519\%) * M$ Required ratio

= $(530/519)$

6). Answer: c)

Total number of female readers of newspaper Dhinamalar in the year 2014

= $44000 * 54 / 100 = 440 * 54 = 23760$

7). Answer: b)

= $56000 * (57 - 43) / 100 = 56000 * 14 / 100 = 7840$

8). Answer: a)

= $48000 * 55 / 100 \div 45000 * 56 / 100$

= $480 * 55 / 450 * 56$

= $66 : 63 = 22 : 21$

9). Answer: d)

Average number of male readers of newspaper Dhinamalar

$$= (1000 / (5 \times 100)) \times (42 \times 49 + 64 \times 55 + 54 \times 52 + 44 \times 46 + 45 \times 44)$$

$$= 2 \times 12390 = 24780$$

10). Answer: b)

Total number of male readers of newspaper Indian Express in the year 2012

$$= 60000 \times 37 / 100 = 600 \times 37 = 22200$$

Total number of male readers of newspaper Dhinamalar in the year 2012

$$= 64000 \times 55 / 100 = 640 \times 55 = 35200$$

$$\% = 22200 / 35200 \times 100 = 222/35200 \times 100 = 63.068 = 63\%$$

Directions (1 – 5): Study the following information carefully and answer the given questions.

The following table shows the ratio of candidates passed in different competitive examinations and the ratio of male and female among them.

State/UT	RRB : IBPS : SSC	RRB M : F	IBPS M : F	SSC M : F
Kerala	12 : 15 : 8	23 : 17	23 : 27	3 : 5
Tamil Nadu	7 : 9 : 5	3 : 4	5 : 4	9 : 11
Andhra	11 : 14 : 9	6 : 5	29 : 13	31 : 49
Karnataka	8 : 11 : 4	3 : 5	5 : 6	3 : 1
Delhi	13 : 15 : 10	3 : 2	8 : 7	12 : 13
Puducherry	9 : 10 : 4	8 : 7	1 : 2	5 : 7

1) If the total number of candidates who passed from Karnataka in IBPS is 440, then the total number of candidates who passed from Karnataka is approximately what percentage of total number of male candidates who passed from Karnataka in SSC?

- a) 520 %
- b) 630 %
- c) 767 %
- d) 445 %
- e) 325 %

2) If the total number of females who passed from Delhi in IBPS is 175, then find the total number of males who passed from Delhi in SSC?

- a) 120
- b) 270
- c) 180
- d) 230
- e) 90

3) If the total number of candidates passed from Puducherry in all the given three competitive examination is 345, then find the ratio between the total number of male candidates passed in RRB to that of total number of female candidates passed in IBPS from Puducherry?

a) 11 : 17

b) 5 : 13

c) 23 : 35

d) 18 : 25

e) None of these

4) Total number of candidates passed from Kerala in RRB is same as the total number of candidates passed from Tamil Nadu in IBPS, which is equal to 360. Find the difference between the total number of candidates passed from Kerala in SSC to that of total number of candidates passed from Tamil Nadu in RRB?

a) 80

b) 40

c) 120

d) 100

e) 60

5) If the total number of candidates passed from Andhra in IBPS is 420, then find the average number of candidates passed from Andhra in RRB, IBPS and RRB?

a) 340

b) 375

c) 250

d) 220

e) None of these

Directions (6 – 10): Study the following information carefully and answer the given questions.

The following table shows the percentage of discount allowed by different shops on different items.

Shops	Mobile	Tablets	Laptop	Camera
A	10%			20%
B		25%		16%
C	18%		14%	
D		15%		20%
E	30%		25%	

6) The marked price of Mobile sold by shop C and E were equal and the total discount allowed by these shops was Rs. 9600 then find the cost price of the mobile sold by shop C if the shopkeeper earned 25% profit on the mobile?

- a) Rs. 13120
- b) Rs. 15300
- c) Rs. 18250
- d) Rs. 20750
- e) None of these

7) The selling price of laptop sold by shop D was equal to the total selling price of tablet and camera sold by the same shop while the difference between the selling price of tablet and camera is Rs. 1500 and both the items (tablet and camera) have same market price, then find the profit earned in laptop sold by the shopkeeper of shop D if he earns profit of 10% by selling the laptop?

- a) Rs. 5300
- b) Rs. 4500
- c) Rs. 3000

d) Rs. 2000

e) Rs. 1600

8) The selling price of mobile and tablet of shop B is in ratio of 2: 3. If the shopkeeper earns a profit of 25% on mobile which is equal to Rs. 500 and 20% on tablet then find the total profit earned by the seller?

a) 1125

b) 1120

c) 3015

d) 2023

e) 1612

9) If the selling price of camera sold by shop A is Rs. 28000 and the profit earned by the shopkeeper is 25% then find the difference between the profits earned by the seller if he decreases the rate of discount to 10% from 20%?

a) Rs. 2800

b) Rs. 1500

c) Rs. 3500

d) Rs. 2400

e) None of these

10) If the marked price of laptop sold by shop E is twice the camera sold by shop B and total selling price of these items is Rs. 18720 then find the profit earned by shop E on selling the laptop if percentage profit on the laptop is 20%?

a) Rs. 1300

b) Rs. 1500

c) Rs. 3000

d) Rs. 2000

e) None of these

Answers :

Direction (1-5) :

1). Answer: c)

The total number of candidates who passed from Karnataka in IBPS = 440

The ratio of total number of candidates passed from Karnataka in RRB, IBPS and SSC = 8 : 11 : 4

$$11's = 440$$

$$1's = 40$$

$$\text{Total candidates} = 23's = 920$$

Total number of candidates who passed from Karnataka in SSC

$$= > 4*40 = 160$$

Total number of male candidates who passed from Karnataka in SSC

$$= > 160*(3/4) = 120$$

$$\text{Required \%} = (920/120)*100 = 767 \%$$

2). Answer: a)

The total number of females who passed from Delhi in IBPS = 175

$$= > 7's = 175$$

$$= > 1's = 25$$

The total number of candidates who passed from Delhi in IBPS

$$= > 15's = 15*25 = 375$$

The total number of candidates who passed from Delhi in SSC

$$= > (375/15)*10 = 250$$

The total number of males who passed from Delhi in SSC

$$= > 250*(12/25) = 120$$

3). Answer: d)

The total number of candidates passed from Puducherry in all the given three competitive examination = 345

The ratio of candidates passed from Puducherry in RRB, IBPS and SSC

$$= > 9: 10: 4$$

$$23's = 345$$

$$1's = 345/23 = 15$$

The total number of male candidates passed in RRB from Puducherry

$$= > (15*9)*(8/15) = 72$$

The total number of female candidates passed in IBPS from Puducherry

$$= > (15*10)*(2/3) = 100$$

Respective ratio = 72: 100 = 18: 25

4). Answer: b)

Total number of candidates passed from Kerala in RRB = 360

Total number of candidates passed from Kerala in SSC

$$= > (360/12)*8 = 240$$

Total number of candidates passed from Tamil Nadu in IBPS = 360

Total number of candidates passed from Tamil Nadu in RRB

$$= > (360/9)*7 = 280$$

Required difference = 280 – 240 = 40

5). Answer: a)

The total number of candidates passed from Andhra in IBPS = 420

The total number of candidates passed from Andhra in RRB

$$= > (420/14)*11 = 330$$

The total number of candidates passed from Andhra in SSC

$$= > (420/14)*9 = 270$$

The total number of candidates passed from Andhra in RRB, IBPS and RRB

$$= > 330 + 420 + 270 = 1020$$

$$\text{Required average} = (1020/3) = 340$$

Direction (6-10) :

6). Answer: a)

Let the marked price of the mobile sold by shop C and E be x,

So,

$$X*(18/100) + x*(30/100) = 9600$$

$$48x/100 = 9600$$

$$X = 9600*(100/48)$$

$$X = \text{Rs. } 20000$$

$$\text{Selling price of mobile sold by shop C} = 20000*(82/100) = \text{Rs. } 16400$$

$$\text{Cost price of the mobile} = 16400*(100/125) = \text{Rs. } 13120$$

7). Answer: b)

Let the marked price of tablet and camera be x,

So,

$$X*(20/100) - x*(15/100) = 1500$$

$$5x/100 = 1500$$

$$5x = 1500*100$$

$$X = 150000/5 = \text{Rs. } 30000$$

Total selling price of tablet and camera

$$= > 30000*85/100 + 30000* 80/100$$

$$= > 25500 + 24000 = \text{Rs. } 49500$$

$$\text{Selling price of laptop} = \text{Rs. } 49500$$

$$\text{Cost price} = 49500 * (100/110) = \text{Rs. } 45000$$

$$\text{Profit earned} = 49500 - 45000 = \text{Rs. } 4500$$

8). Answer: a)

$$\text{Selling price of the mobile} = 500 * (125/25) = \text{Rs. } 2500$$

$$\text{Selling price of Tablet} = 2500 * (3/2) = \text{Rs. } 3750$$

$$\text{Profit earned on tablet} = 3750 * (20/120) = \text{Rs. } 625$$

$$\text{Total profit earned by the seller} = 500 + 625 = \text{Rs. } 1125$$

9). Answer: c)

Marked price of the camera

$$= > 28000 * (100/80) = \text{Rs. } 35000$$

Profit earned by the shop A

$$= > 28000 * (25/125) = \text{Rs. } 5600$$

$$\text{Cost price of the camera} = 28000 - 5600 = \text{Rs. } 22400$$

Selling price when 10% discount is allowed

$$= > 35000 * 90/100 = \text{Rs. } 31500$$

$$\text{Profit when 10% discount is allowed} = 31500 - 22400 = \text{Rs. } 9100$$

$$\text{Required difference between profit} = 9100 - 5600 = \text{Rs. } 3500$$

10). Answer: d)

Let the marked price of camera sold by shop B be x and marked price of laptop sold by shop E be $2x$,

So,

$$2x * (75/100) + x * (84/100) = 18720$$

$$(150x + 84x)/100 = 18720$$

$$234x/100 = 18720$$

$$X = 18720 * (100/234)$$

$X = \text{Rs. } 8000$

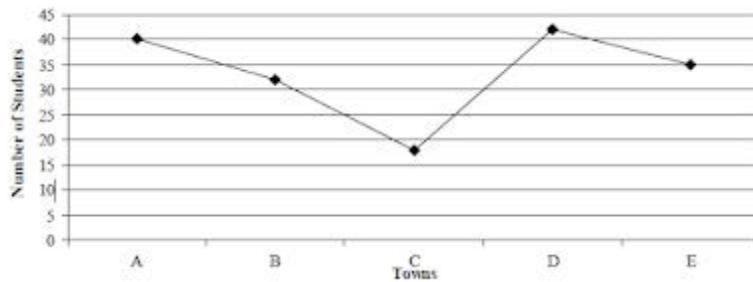
Marked price of laptop = Rs. 16000

Selling price of laptop sold by shop E = $16000 * (75/100) = \text{Rs. } 12000$

Profit earned = $12000 * (20/120) = \text{Rs. } 2000$

Directions : Study the following Grpah carefully and answer the questions given below:

Number of Students Appearing for Aptitude Test from Various Towns (Number in thousands)



1. What is the average number of students appearing for Aptitude test from all the Towns together?

- 1) 33500
- 2) 3350
- 3) 17500
- 4) 33.5
- 5) None of these

2. The number of students appearing for the Aptitude test from Town D is approximately what percent of the number of students appearing for the Aptitude test from Town C?

- 1) 243
- 2) 413
- 3) 134
- 4) 341
- 5) 143

3. What is the respective ratio of the number of students appearing for the Aptitude test from Town C and D together to the number of students appearing for the Aptitude test from Town A, D and E together?

- 1) 11 : 13
- 2) 20 : 43
- 3) 20 : 47
- 4) 37 : 20
- 5) None of these

4. What is the respective ratio of the number of students appearing for the aptitude test from Town B to Town A?

- 1) 3 : 4
- 2) 13 : 16
- 3) 11 : 16

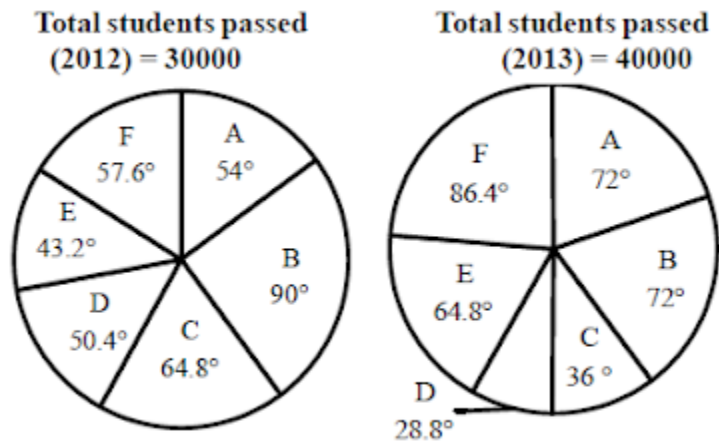
- 4) 2 : 3
- 5) None of these

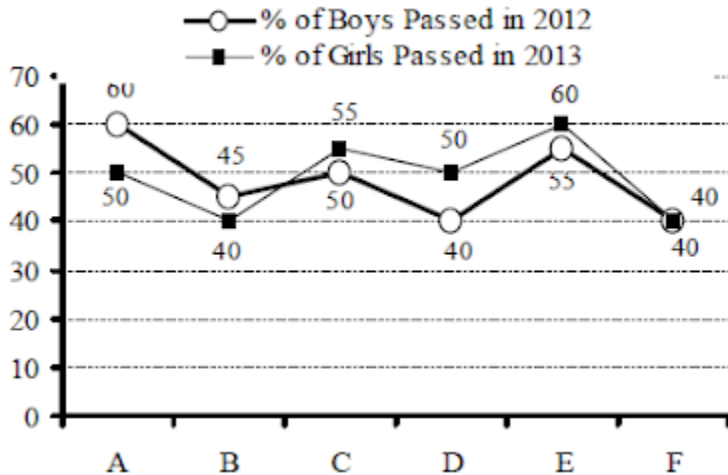
5. The number of students appearing for the aptitude test from Town E is approximately what percent of total number of students appearing for the Aptitude test from all the Towns together?

- 1) 15
- 2) 17
- 3) 19
- 4) 21
- 5) 23

Directions: In the given pie -charts the distribution of passed students from six different colleges (A, B, C, D, E and F) of a city during the year 2012 and 2013 is given. In the line graph the percentage of boys passed in year 2012 and the percentage of girls passed in 2013 is shown. Answer the following questions based on these graphs.

Total students passed in 2012 = 30000
Total students passed in 2013 = 40000





6. What is the number of female students passing in 2012 from College C?

- 1) 2000
- 2) 2300
- 3) 2400
- 4) 2500
- 5) 2700

7. What is the number of male students passing in year-2013 from College F?

- 1) 5760
- 2) 5750
- 3) 5740
- 4) 5730
- 5) 5720

8. What is the total number of females passing in 2012 from all colleges?

- 1) 14645
- 2) 15645
- 3) 16645
- 4) 17645
- 5) 18645

9. What is the difference between the number of male students passing in year 2013 and that of female students passing in the same year?

- 1) 1690
- 2) 1680
- 3) 1670
- 4) 1660
- 5) 1650

10. Number of boys passing from College E in 2012 is what percentage of the number of boys passing from College C in year 2013?

- 1) 70%
- 2) 80%
- 3) 90%
- 4) 100%
- 5) 110%

Answers:

1. 1

$$\begin{aligned} \text{Reqd avg marks} &= (40 + 32.5 + 17.5 + 42.5 + 35)/5 \text{ thousand} \\ &= 16.5 * 1000/5 = 33500 \end{aligned}$$

2. 1

$$\begin{aligned} \text{Reqd percentage} &= (42.5 * 1000)/(17.5 * 1000) * 100\% \\ &= 243\% \text{ approx} \end{aligned}$$

3. 1

$$\begin{aligned} \text{Required ratio} &= (17.5 + 42.5)\text{thousand} : (40 + 42.5 + 35) \text{ thousands} \\ &= 60 : 117.5 \\ &= 20 : 39.16 \\ &= 20 : 39 \end{aligned}$$

4. 2

$$\text{Reqd Ratio} = 32500 : 40000$$

5. 4

$$\begin{aligned} \text{Reqd percentage} &= (35000 * 100)/(40 + 32.5 + 17.5 + 42.5 + 35) * 1000 * 100\% \\ &= 35000/1675\% = 21\% \text{ approx} \end{aligned}$$

6. 5

$$\begin{aligned} &50\% \text{ of } (64.8/360 * 30000) \\ &= 50/100 * 5400 = 2700 \end{aligned}$$

$$\begin{aligned} &7. 60\% \text{ of } (86.4/360 * 40000) = 60/100 * 9600 \\ &= 5760 \end{aligned}$$

8. 2

$$\begin{aligned} \text{Total} &= 30000/(360 * 100) [54 * 40 + 90 * 55 + 64.8 * 50 + 50.4 * 60 + 43.2 * 45 + 57.6 * 60] \\ &30000/(360 * 100) [2160 + 4950 + 3240 + 1944 + 3456] \\ &30000/36000 * 18774 = 15645 \end{aligned}$$

9. 2

$$\begin{aligned} \text{Total boys} &= 4000 + 4800 + 1800 + 1600 + 2880 + 5760 = 20840 \\ \text{Total girls} &= 40000 - 20840 = 19160 \\ \text{Diff} &= 20840 - 19160 = 1680 \end{aligned}$$

10. 5

$$\text{E-Boys}_{2012} = 43.2/360 * 30000 * 55/100 = 1980$$

$$\text{C-Boys2013} = 36/360 * 40000 * 45/100 = 1800$$

$$\text{Req\%} = 1980 * 100/1800 = 110\%$$

Direction (1-3): Study the following information carefully and answer the question given below:

Monika starts walking from point A. After walking 4 km in east direction she reached to point B. Then she turned to her left and walk 3 km to reach point C. From there she turned back to A via shortest route. From there she starts walking in south direction and after walking 5 km she reached to point D, then she turned left and walks 8km to reach point E. From there she turns left and walks equal distance of distance from point A to point D and reach point F. Finally she turned right and reaches to point G after walking 4km.

Q1. What will be the shortest distance of point A to point C?

- (a) 5 km
- (b) 14 km
- (c) 8 km
- (d) 6 km
- (e) 9 km

Q2. Which points are in a straight line?

- (a) A, D, G
- (b) C, B, E
- (c) A, B, D
- (d) B, F, G
- (e) F, C, G

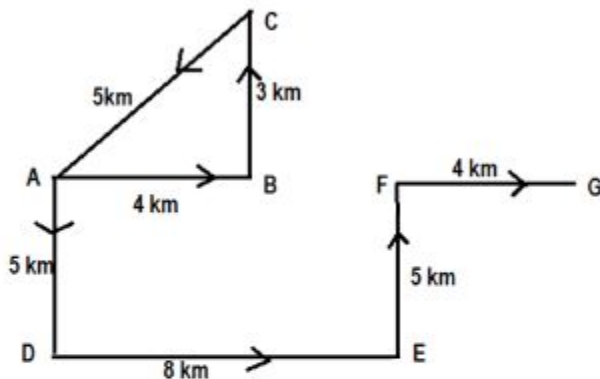
Q3. In which direction is point G with respect to point C?

- (a) West
- (b) North
- (c) North-East
- (d) South-West
- (e)

South-East

Solutions (1-3):

Sol.



S1. Ans.(a)

Sol.

S2. Ans.(d)

Sol.

S3. Ans.(e)

Sol.

Directions (4-8): Read the following information carefully and answer the questions given below:

There are six bikes – P, Q, R, S, T, U – parked in a row facing north direction, but not necessarily in the same order. The distances between two adjacent bikes are successive multiples of five (i.e. if the distance between the 1st and the 2nd bike is 5 m, 1st and the 3rd bike is 10 m and between 1st and 4th bike is 15 m and so on.)

Information regarding all the bikes is:

I. Bike R is to the immediate right of P and the distance between them is 25m.

II. Bike T is to the left of Bike U but not immediate left and the total distance between them is 75m.

III. The person who has Bike Q takes his bike as he wants to go to his office so he moves 32 m in south direction from there he turns to his right and moves 12 m then he turns 90° in clockwise direction and moves 16m and after walking 8 m in east direction, he finally reached to his office.

IV. The total distance between bike T and P is a multiple of 11.

V. There is only one bike is parked to the right of Bike Q.

VI. If Bike S starts moving in north direction and after walking 18 m it turns to the right and covers 45m before turning to right. After that it moves 2m in the same direction. Now Bike S, Bike R and another Bike V (which is exactly between Bike S and Bike R) will be in a straight line manner.

Q4. What is the distance between Bike R and Bike U?

(a) 120 m

- (b) 105 m
- (c) 140 m
- (d) 85 m
- (e) 95 m

Q5. How many Bikes are there between Bike P and Bike Q?

- (a) Two
- (b) None
- (c) More than three
- (d) One
- (e) Three

Q6. How far is Bike V from Bike R?

- (a) 25 m
- (b) 8 m
- (c) 10 m
- (d) 32 m
- (e) 27 m

Q7. What is the position of the office of a person with respect to the initial position of Bike Q?

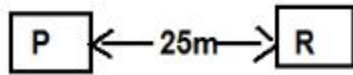
- (a) $5\sqrt{34}$ m towards north-west
- (b) 50 m towards north-east
- (c) $4\sqrt{17}$ m towards south-west
- (d) $5\sqrt{34}$ m towards south-east
- (e) None of these

Q8. If Bike S starts moving in north direction from its initial position and after walking 5 m it turns to the right and covers 45m and then turns to left and moves 5m. Now how far is Bike S with respect to Bike T?

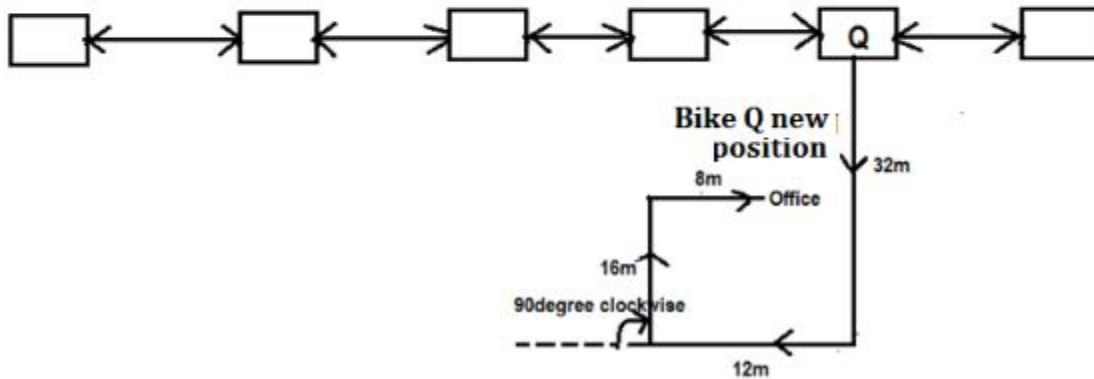
- (a) $8\sqrt{3}$ m towards north-west
- (b) 30 m towards south-east
- (c) $10\sqrt{7}$ m towards north-east
- (d) $10\sqrt{10}$ m towards north-west
- (e) None of these

Solutions (4-8):

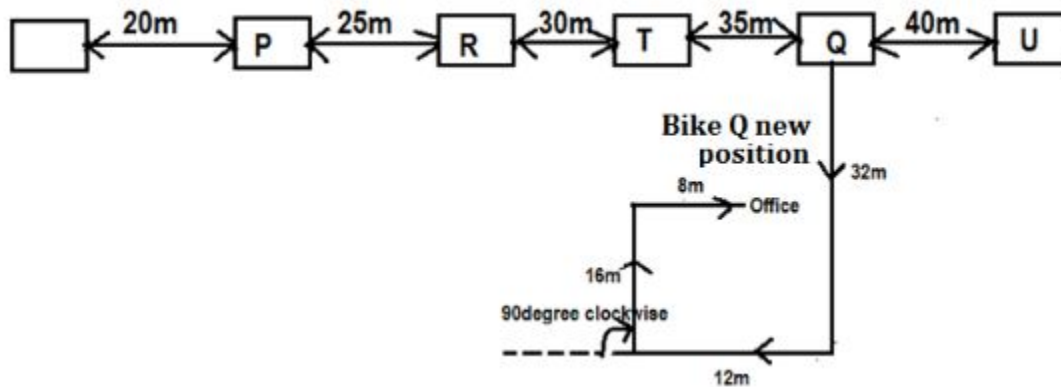
From the given condition, Bike R is to the immediate right of P and the distance between them is 25m.



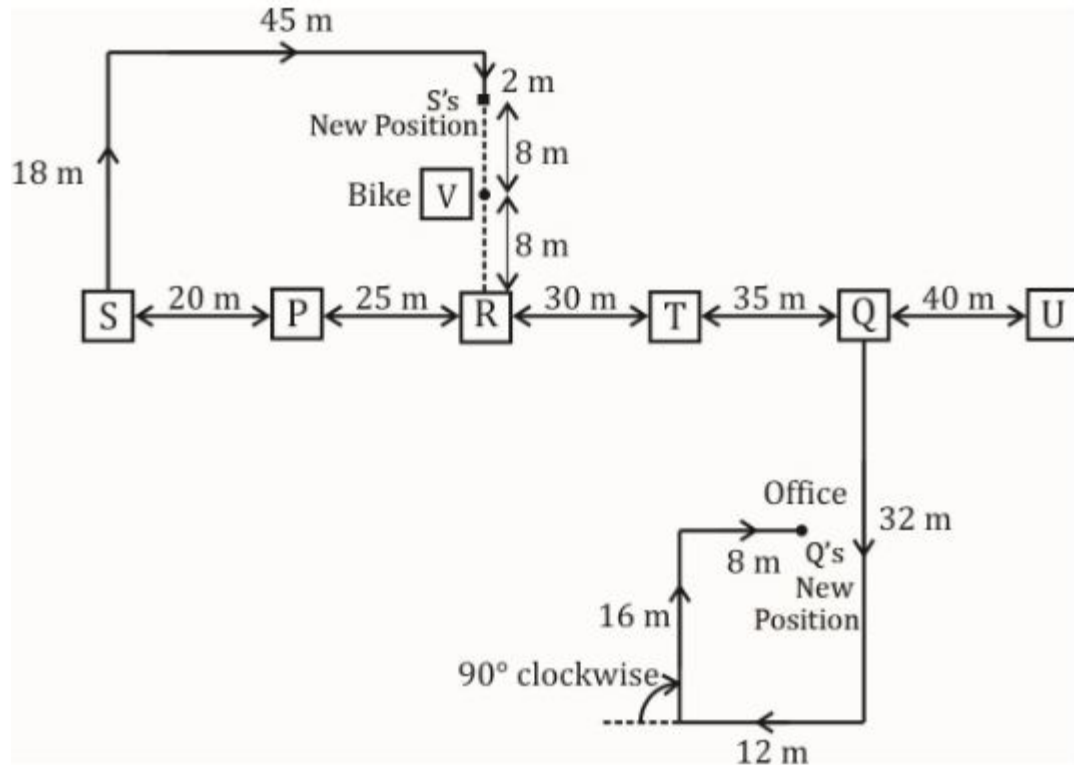
There is only one bike is parked to the right of Bike Q. The person who has Bike Q takes his bike as he wants to go to his office so he moves 32 m in south direction from there he turns to his right and moves 12 m then he turns 90° in clockwise direction and then moves 16m and after walking 8 m in east direction, he finally reached to his office.



Case:2-



But it is given that the total distance between bike T and P is a multiple of 11. So from this case-1 will be eliminated. Now continue with case-2 there is only one place left for S. Also given that If Bike S starts moving in north direction and after walking 18 m it turns to the right and covers 45m before turning to right. After that it moves 2m in the same direction. Now Bike S, Bike R and another Bike V (which is exactly between Bike S and Bike R) will be in a straight line manner. So the final diagram will be-



S4. Ans.(b)

Sol.

S5. Ans.(a)

Sol.

S6. Ans.(b)

Sol.

S7. Ans.(c)

Sol.

S8. Ans.(d)

Sol.

Directions (9-10): Study the information carefully and answer the questions given below.

Vivek started walking from point P towards south direction after walking of 11 meter reached point Q. From there take a right turn and walked 6 meter to reached point R. From there he turnaround and walked 11 meter to reached point J. From there take a right turn and after walking of 1 meter again take a right turn and walk 10 meter to reach point M.

Q9. What is the distance between point M to Point P?

(a) 12 meter

- (b) 13 meter
- (c) 14 meter
- (d) Can't be determined
- (e) None of these

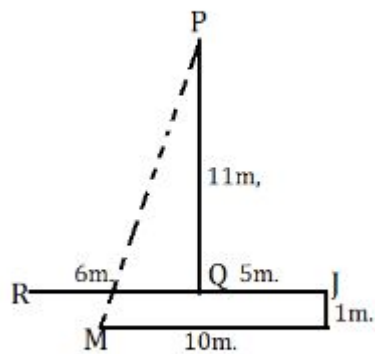
Q10. How far and in which direction is point R with respect to point M?

- (a) $\sqrt{2}$ meter, north-west
- (b) 2 meter, south-east
- (c) 1.5 meter, north-east
- (d) 1 meter, south-west
- (e) None of these

Solutions (9-10):

S9. Ans.(b)

Sol.



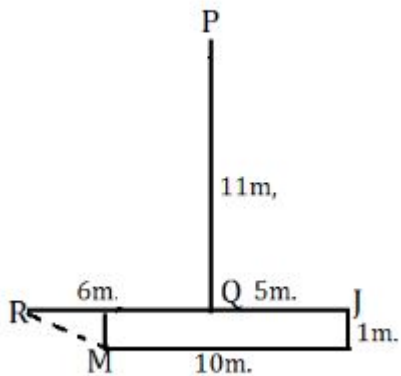
$$12^2 + 5^2$$

$$144 + 25 = 169$$

$$= 13m.$$

S10. Ans.(a)

Sol.



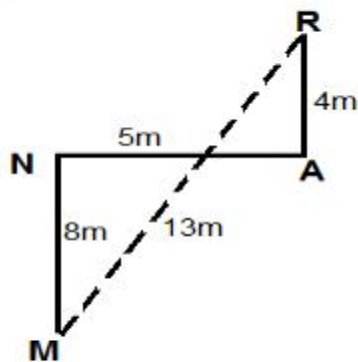
$$\sqrt{1^2 + 1^2} = \sqrt{2}m.$$

Q11. Point R is 4m north of point A. Point N is 5m west of point A. Point M is 8m south of point N. Amit starts walking in north direction from point N and covers a certain distance then he takes a right turn, and again covers certain distance to reach at point X. What is the shortest distance between point R and M and what is the direction of point X with respect to point M?

- (a) 13m, South-west
- (b) 15m, South-west
- (c) 13m, North-west
- (d) 13m, North-east
- (e) None of these

S11. Ans.(d)

Sol.



$$\begin{aligned} \text{Distance } MR^2 &= (MN+AR)^2 + NA^2 \\ &= 12^2 + 5^2 \end{aligned}$$

$$MR = 13\text{m}$$

Direction (12-13): Study the following information carefully to answer the given questions.

Akash starts walking towards north. After walking 4km he reached to point P, from there he turns to his left and travels 6 km to reach point Q, then he turns towards his right and travels 4km then after walking 3km towards his right he stopped. Another person Abhay starts walking in south and after walking 5km he reached to point X from there he turns to his right then he walks 8km to reach point Y which is in the east of point P.

Q12. In which direction is point X with respect to Akash's ending point?

- (a) South
- (b) North-east
- (c) South-east
- (d) North
- (e) None of these

Q13. If Abhay takes right turn from point Y and after moving 4 km, he turns towards his left and walks 2km to reach point Z. Then how far is point Q with respect to point Z?

- (a) 3km
- (b) 4km

- (c) 5km
- (d) 8km
- (e)

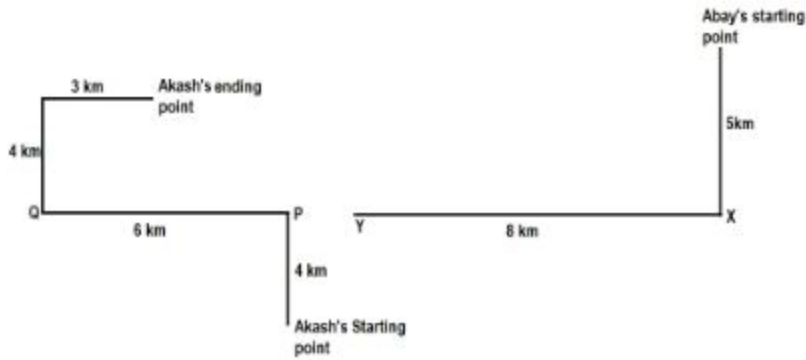
Can't

be

determine

Solutions (12-13):

Sol.



S12. Ans.(c)

Sol.

S13. Ans.(e)

Sol.

Direction (14-15): Read the following information carefully and answer the questions given below:

Shreyas starts walking towards east direction. After walking 15 km he turns towards north and walks 8km. Now he turns to the west and walks 18km. From there he turns to his left and walks 5 km. Now, again turns to his left and walks 3km. From there he turns to his right and walks 2km. Now he turns to his right and moves 8km and then turns to his right and walks 3km. Finally turns to his right and walks 4km and reached the final position.

Q14. What is the direction of Shreya at the final position with respect to his initial position?

- (a) North-west
- (b) West
- (c) North East
- (d) South-east
- (e) South-west

Q15. If Shreyas walks a distance of 4 m in east direction from his final position, then how far is Shreyas from his initial position?

- (a) 5km
- (b) 4km
- (c) 3km
- (d) 6km
- (e)

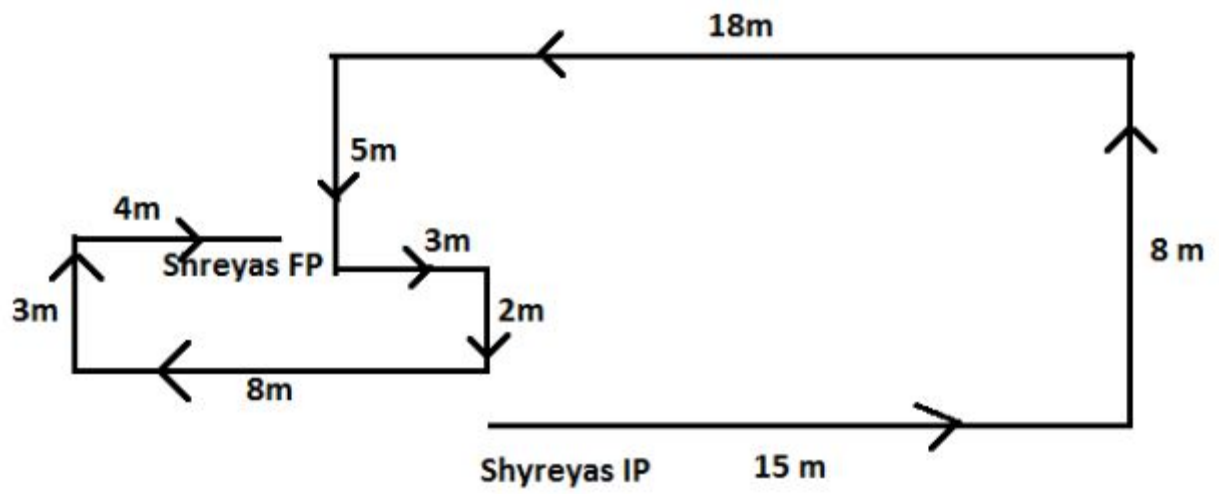
None

of

these

Solutions (14-15):

Sol.



S14. Ans.(a)

Sol.

S15. Ans.(b)

Sol.

1. **A, B and C enter into a partnership and their shares are in ratio $1/2 : 1/3 : 1/4$, after 2 months, A withdraws half of his capital and after 12 months, a profit of Rs 1050 is divided among them. What is B's share ?**
 - A.Rs.420
 - B.Rs. 300
 - C.Rs.400
 - D.Rs.350
2. **A started a business with Rs. 21,000 and is joined afterwards by B with Rs. 36,000. After how many months did B join if the profits at the end of the year are divided equally?**
 - A.8 months
 - B.2 months
 - C.5 months
 - D.7 months
3. **Anju and Bimal are partners in a business. Anju contributes $1/4$ of the capital for 15 months and Bimal received $2/3$ of the profit, for how long Bimal's money was used ?**
 - A.5 months
 - B.3months
 - C.8 months
 - D.10 months
4. **In a business P and R invested amounts in the ratio 2 : 1, whereas the ratio between amounts invested by P and Q was 3 : 2 . If Rs. 2,236 was their profit, how much amount did Q receive ?**
 - A.Rs.650
 - B.Rs.688
 - c.Rs.588
 - D.Rs.490
5. **A, B and C rent a land. A puts 10 tractors for 7 months, B puts 12 tractors for 5 months and C puts 15 tractors for 3 months . If the rent of the land is Rs. 175000, how much must C pay as his share of rent?**
 - A.45000
 - B.50000
 - C.57000
 - D.64000
6. **P and Q started a partnership business investing some amount in the ratio of 3:5. R joined them after six months with an amount equal to that of Q. In what proportion should the profit at the end of one year be distributed among P, Q and R?**
 - A.5 : 8 : 10
 - B.6 : 10 : 5
 - C.6 : 4 : 10
 - D.10 : 6 : 3
7. **A and B established a firm together. A's investment was thrice that of B's. A also kept the investment for twice as much time as B. If B got a profit of 4000, what was the total**

profit?

A.30,000

B.28,000

C.40,000

D.45,000

8. **A and B entered into a partnership investing Rs. 16000 and Rs. 12000 respectively. After 3 months, A withdrew Rs. 5000 while B invested Rs. 5000 more. After 3 more months C joins the business with a capital of Rs. 21000. The share of B exceeds that of C, out of a total profit of Rs. 26400 after one year by**
- A.Rs. 2400
B.Rs. 3600
C.Rs. 3000
D.Rs. 4800
9. **Ashok being the sleeping partner receives 1/10th of profit and the remaining is divided between pramod and prakash in the ratio of 1:2..If the difference between the profit shares of Ashok and Prakash is Rs.2000.What is pramod's share in Rs.?**
- A.Rs.1800
B.Rs.2200
C.Rs.1200
D.Rs.1500
10. **P and Q invest in a business in the ratio 3 : 2. If 5% of the total profit goes to charity and P's share is Rs. 855, the total profit is:**
- A.Rs. 1435
B.Rs. 1500
C.Rs. 1538
D.Rs. 1580
11. **A, B and C jointly start a business venture with a agreement that A would invest Rs. 13,000 for 6 months, B, Rs. 16,800 for 5 months and C, Rs. 20,000 for 3 months. A wants to be the working member for which he was to receive 5% of the profits. The profit earned was Rs. 14800 Calculate the share of B in the profit?**
- A)Rs 6000
B)Rs 5320
C)Rs 7800
D)Rs 5840
E)None of these
12. **Anuj, kamlesh and Vinni invested Rs. 16000, Rs. 8000 and Rs. 16000 respectively to open a business. Anuj left after 6 months. If after 8 months, there was a gain of Rs. 8010, then What will be the share of kamalesh?**
- A)1780
B)1635
C)1680

D)1800

E)None of these

13. **A and B start a business with investments of Rs. 10000 and Rs. 9000 respectively. After 4 months, A takes out $\frac{1}{2}$ of his capital. After 2 more months, B takes out $\frac{1}{3}$ of his capital while C joins them with a capital of Rs. 14000. At the end of a year, they earn a profit of Rs. 10160. Find the share of each member in the profit?**

A) Rs A – Rs. 3300, B – Rs. 3500, C – Rs. 3360

B)Rs A – Rs. 3200, B – Rs. 3600, C – Rs. 3360

C)Rs A – Rs. 3200, B – Rs. 3700, C – Rs. 3260

D)Rs A – Rs. 3200, B – Rs. 3500, C – Rs. 3460

None of these

14. **Anaya, Bela and Cendrella enter into a partnership Bussiness with Anaya's contribution Rs. 20,000. If out of a total profit of Rs. 2000, Anaya gets Rs.100 and Bela gets Rs. 600, cendrella gets rs 400 then Cendrella's capital is:**

A)Rs 8000

B)Rs 8500

C)Rs 7000

D)Rs 6500

E)None of these

15. **Riya and sima invested in a partnership business. Riya invests Rs. 70,000 for 8months and sima invests Rs. 84,000 for 10 months. Out of a profit of Rs. 63140, Riya's share is:**

A)Rs 25000

B)Rs 25256

C)Rs 24500

D)Rs 25270

None of these

16. **A starts business with Rs. 7000 and after 5 months, B joins with A as his partner. After 1 year, the profit is divided in the ratio 2 : 3. What is B's contribution in the capital?**

A)Rs 13000

B)Rs 12000

C)Rs 15000

D)Rs 18000

None of these

17. **shikha started a business investing Rs. 50,000 in 1999, In 2000, she invested an additional amount of Rs. 20,000 and Raju joined him with an amount of Rs. 70,000. In 2001, Shikha invested another additional amount of Rs. 20,000 and Jolly joined them with an amount of Rs. 70,000. What will be Raju's share in the profit of Rs. 300,000 earned at the end of 3 years from the start of the business in 1999?**

A)Rs Rs. 250,000.

B)Rs Rs. 120,000.

C)Rs Rs. 100,000.

D)Rs Rs. 150,000.

E)None of these

18. **A, B and C started a business. They invest Rs. 80,000, Rs. 160,000 and Rs. 2,40,000 respectively. At the end of the first year, B withdraws Rs. 80,000, while at the end of the second year, C withdraws Rs. 160,000. In what ratio will the profit be shared at the end of 3 years?**

A)2:3:4

B)3:4:7

C)3:2:5

D)3:1:4

E)None of these

19. **3 partners P, Q, R start a business. Twice P's capital is equal to thrice Q's capital and Q's capital is four times R's capital. Out of a total profit of Rs. 16,500 at the end of the year, Q' share is:**

A)2000

B)4000

C)5000

D)6000

E)None of these

20. **A, B, C hired a car for Rs. 1040 and used it for 7,8 and 11 hours respectively. Hire charges paid by B were:**

A)160

B)180

C)220

D)225

E)None of these

ANSWER :

1. **C(Rs.400)**

Explanation : Ratio of investments = $1/2 : 1/3 : 1/4$, LCM of 2, 3, 4 = 12 ,multiply ratios with 12 we get $6 : 4 : 3$, so,initial investment be $6x, 2x$ and $3x$ so, we can write: $A : B : C = (6x \times 2 + 3x \times 10) : (4x \times 12) : (3x \times 12) = 7:8:6$
B's share = $(8/21) \times 1050 = 400$

2. **C (5 months)**

Explanation – let B joined after x months
Then, $21000 \times 12 = 36000 \times (12 - x)$
 $36 = 180x = 5$ Hence, B joined after 5 months

3. **D (10 months)**

Explanation- Let total profit is x
Then Bimal's share in profit = $(2/3)x$
so anju's share in profit = $x - (2/3)x = x/3$
so, we get ratios of profit of Anju : Bimal :: 1:2
Let total capital invested be Rs P and Anju's money was used for 15 months while Bimal's money was used for b months .
then, $(1/4)P \times 15$ divide by $(3/4)P \times b = 1/2$ [Capital \times time = profit] so, we get $b=10$
Bimal's money was used for 10 months

4. **B(Rs.688)**

Solution : $P : Q = 3 : 2$, $P : R = 2 : 1$ [given] $Q : P = 2 : 3$ [reverse], $Q : P = 4 : 6$ [multiply by 2] Now, $P : R = 2 : 1$
 $P : R = 6 : 3$ [multiply by 3] $P : Q = 6 : 4$ [after $\times 3$] , So $Q : P : R = 4 : 6 : 3$
or, $P : Q : R = 6 : 4 : 3$
Q's share = $4/13 \times 2236 = \text{Rs.}688$

5. **A (45000)**

Explanation – $A : B : C = 10 \times 7 : 12 \times 5 : 15 \times 3$
 $= 70 : 60 : 45$
 $= 14 : 12 : 9$.
 \therefore C's rent = Rs. $[175000 \times 9/35] = \text{Rs.} 45000$.

6. **B (6 : 10 : 5)**

Explanation – Let the initial investments of P and Q be $3a$ and $5a$.
 $P : Q : R = (3a \times 12) : (5a \times 12) : (5a \times 6) = 36 : 60 : 30 = 6 : 10 : 5$.

7. **B(28,000)**

Explanation:- let B's investment = X then A's investment = $3X$
lets tim for B = t then, A's time = $2t$
A:B
 $3X \times 3t : X \times t$
 $6:1$
B's share = $1/7 \times \text{total} = 4000$
total = 28,000

8. **B (Rs. 3600)**

Explanation: $A:B: C = 16000 \times 3 + 11000 \times 9 : 12000 \times 3 + 17000 \times 9 : 21000 \times 6 =$

$$147:189:126 = 7:9:6$$

Difference of B and C's shares = Rs. $[26400 \times (9/22) - 26400 \times (6/22)] = \text{Rs. } 3600$.

9. **C (1200)**

Explanation:-

let total profit = x

ashok's share in profit is $(1/10)x$

remaining profit = $x - (1/10)x = (9/10)x$

pramod's share = $1/3 \times (9/10)x = (3/10)x$

Prakash's share = $2/3 \times (9/10)x = (6/10)x$

ashok - prakash = $(6/10)x - (1/10)x = (5/10)x$

$5/10 x = 2,000$ so, $x = 4000$

pramod's share = $(3/10) \times 4000 = 1200$

10. **B (Rs.1500)**

Explanation:

Let the total profit be Rs. 100.

After paying to charity, A's share = $\text{Rs. } 95 \times 3/5 = \text{Rs. } 57$.

If A's share is Rs. 57, total profit = Rs. 100.

If A's share Rs. 855, total profit = $(100/57) \times 855 = 1500$.

11. **B (Rs 5320)**

Explanation -

For managing, A receives = 5% of Rs. 14800 = Rs. 740.

Balance = Rs. (14800 - 740) = Rs. 14060

Ratio of their investments = (13000 x 6) : (16,800 x 5) : (20000 x 3)

= 78000 : 84000 : 60000 = 13 : 14 : 10

B's share = Rs.14060 x 14/37 = 5320

12. **A (1780)**

Explanation -

Anuj : Kamalesh : Vinni = (16000 x 6) : (8000 x 8) : (16000 x 8) = 48 : 32 : 64 = 3 : 2 : 4.

Kamal's share = Rs.8010 x 2/9

= Rs. 1780.

13. **B (A - Rs. 3200, B - Rs. 3600, C - Rs. 3360)**

Explanation -

A : B : C = (10,000 x 4 + 5000 x 8) : (9000 x 6 + 6000 x 6) : (14000 x 6)

= 80000 : 90000 : 84000 = 40 : 45 : 42

A's share = Rs. 10160 x 40/127 = Rs. 3200;

B's share = Rs. 10160 x 45/127 = Rs. 3600;

C's share = Rs. 10160 x 42/127 = Rs. 3360.

14. **A (Rs. 8000)**

Explanation -

A : B : C = 1000 : 600 : 400 = 5 : 3 : 2.

Let their capitals be 5x, 3x, 2x respectively.

Then, 5x = 20000 x = 4000.

C's capital = 2x = Rs. 8000.

15. **B (Rs. 25256)**

Explanation –

Ratio of their shares = $(70000 \times 8) : (84000 \times 10) = 2 : 3$.

Reena's share = $\text{Rs.}63140 \times 2/5 = \text{Rs. } 25256$

16. **D (Rs 18000)**

Explanation –

Let B's capital be Rs. x. Then.

$(7000 \times 12) / 7x = 2/3$ [capital ratio= profit ratio] $14x = 252000$ $x = 18000$

17. **C (Rs. 100,000)**

Explanation –

Shikha : Raju : Jolly

= $(50000 \times 12 + 70000 \times 12 + 90000 \times 12) : (70000 \times 24) : (70000 \times 12)$

= $2520000 : 1680000 : 840000 = 3 : 2 : 1$

Raju's share = $\text{Rs.}300,000 \times 2/6 = \text{Rs. } 100,000$.

18. **D (3:4:7)**

Explanation – $A : B : C = (80000 \times 36) : (160000 \times 12 + 80000 \times 24)$

$(240000 \times 24 + 80000 \times 12) = 144 : 192 : 336 = 3 : 4 : 7$

19. **D (6000)**

Explanation – Let $R = a$. Then, $Q = 4a$ and $2P = 3 \times 4a = 12a$ or $P = 6a$.

$\therefore P : Q : R = 6a : 4a : a = 6 : 4 : 1$.

So, Q's capital = $\text{Rs. } [16500 \times 4/11] = \text{Rs. } 6000$

20. **A (320)**

Explanation – $A : B : C = 7 : 8 : 11$.

Hire charges paid by B = $\text{Rs. } [1040 \times 8/26] = \text{Rs.}320$

