1. Questions

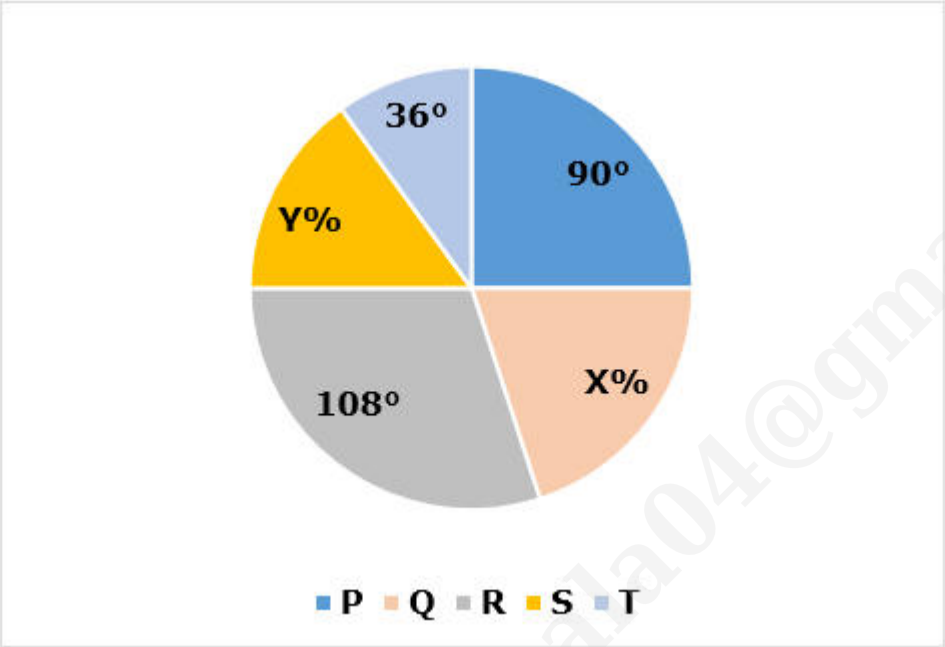
Study the following data carefully and answer the questions given below:

The given pie chart shows the degree or percentage distribution of the number of sunglasses (Aislin and Royal son) in five different outlets i.e. P, Q, R, S and T.

Note:

I). X – Y = 5

II). The number of sunglasses sold by S is 360



If the ratio of the number of Aislin to Royal son sunglasses sold by Q is 5:3 respectively and the number of Aislin sunglasses sold by P is 60 more than that by Q, then the number of Royal son sunglasses sold by P is how much percent of the total number of sunglasses in all given five outlets?

a. 12%

b. 10%

c. 8%

d. 16%

e. 20%

2. Questions

If the number of Aislin sunglasses sold by T is twice more than the number of Royal son sunglasses sold by T and 30 more than the number of Aislin sunglasses sold by S, then find the number of Royal son sunglasses sold by S?

a. 220

b. 216

c. 204

d. 210

e. 240

3. Questions

If the total number of sunglasses (Aislin + Royal son) sold by U is 25% more than that of R while number of Aislin sunglasses sold by U is 500, then find the number of Royal son sunglasses sold by U?

a. 400

b. 440

c. 480

d. 425

e. 485

4. Questions

The ratio of number of Royal son sunglasses sold by Q, the number of Aislin sunglasses sold by Q and that by S is 6:10:5 respectively. If average number of Royal son sunglasses sold by Q, S and W together is 150, then find the number of Royal son sunglasses sold by W?

a. 42

b. 58

c. 74

d. 88

e. 60

5. Questions

If 60% and 62.5% out of total number of sunglasses by P and Q are Aislin respectively, then find the ratio of the number of Aislin sunglasses sold by P to the number of Royal son sunglasses sold by Q.

a. 2:1

b. 3:2

c. 4:3

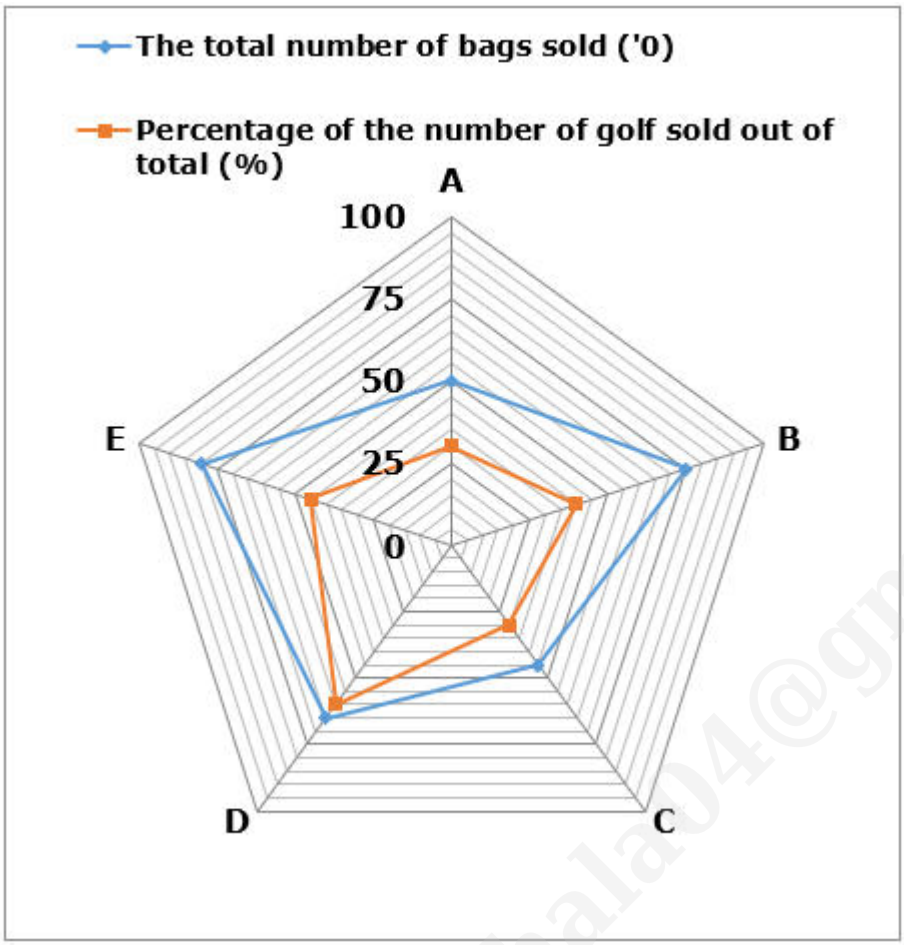
d. 1:2

e. 1:3

6. Questions

Study the following data carefully and answer the questions given below:

The given radar graph shows the total number of bags (golf + tennis) sold by five different malls and the percentage of the number of golf bags sold by each mall out of the total number of bags sold by that mall.



If ratio of the number of golf and tennis bags unsold and the ratio of the number of golf and tennis bags manufactured in 'D' is 3:4 and 7:5 respectively, then find the number of bags unsold in D?

a. 70

b. 56

c. 63

d. 44

e. 38

7. Questions

The total number of bags (tennis + golf + gym bag) sold in C is 570 and the ratio of number of bags (tennis, golf and gym bag) bought by men in C is 10:5:4 respectively. If the number of women bought the bag in C is 190, then find the sum of the number of golf bags bought by men in C and the number of gym bags sold in C?

a. 208

b. 220

c. 148

d. 176

e. 264

8. Questions

If the number of tennis bags sold in F is 320% more than that of in C, then find the difference between the number of tennis bags sold in F and the total number of bags sold in E?

a. 303

b. 424

c. 323

d. 486

e. 523

9. Questions

The average number of golf bags sold in B and E together is how much percent more/less than the number of golf bags sold by A?

a. 125% less

b. 120% more

c. 108% less

d. 90% less

e. 96% more

10. Questions

In mall A, 20% of total number of bags were damaged out of which number of golf bags is 10 . If only non – damaged bags were sold in mall A, then find the total number of tennis bags in mall A.

a. 425

b. 405

c. 480

d. 472

e. 465

11. Questions

Study the following data carefully and answer the questions given below:

The given data is about the number of firecrackers (wheels + sparklers) sold by three different sellers. The ratio between the number of wheels sold by seller M and the number of sparklers sold by seller N is 9:11

respectively. The total number of firecrackers sold by seller N is 300 and the number of wheels sold by him is 140 less than that of sparklers. The ratio of the number of wheels sold by seller M to O is 6:5 respectively. The ratio of the number of firecrackers sold by M, N and O is 7:6:8 respectively.

The total number of firecrackers sold by M is 75 more than the number of rockets sold by M. If the ratio of the number of rockets sold by M to the number of sparklers sold by O is (x+6): (x+5) respectively, then find the value of x.

a. 3

b. 7

c. 6

d. 4

e. 5

12. Questions

If the total number of firecrackers (wheels + bomb + rockets) sold by N is 260 and the ratio of the number of bomb to that of rockets sold by N is 2:1, then find the difference of the number of rockets sold by N and the number of sparklers sold by M.

a. 128

b. 110

c. 132

d. 88

e. 146

13. Questions

If the total number of firecrackers (wheels + sparklers) sold by P is 16% more than that of by O and the number of sparklers sold by P is 32 more than wheels sold by M, then find the number of wheels sold by P?

a. 186

b. 192

c. 212

d. 252

e. 288

14. Questions

The total revenue generated by M is Rs. 31400. If the cost price of sparklers sold by M is Rs. 100, then find the cost price of a wheel by sold by M?

a. Rs. 144

b. Rs. 84

c. Rs. 80

d. Rs. 72

e. Rs. 104

15. Questions

Find the difference of the sum of the number of sparklers sold by M, N and O together and the sum of the number of wheels sold by M, N and O together.

a. 264

b. 216

c. 230

d. 208

e. 272

16. Questions

The quantity of milk and water in the mixture is 108 litres and 48 litres respectively and then 'x' litres of milk is added, then the ratio of milk and water becomes 7:3 respectively. After that If 'y' litres of the mixture is taken out and 2 litres of water is added then the ratio of milk and water becomes 11:5 respectively, then find the value of y?

a. 21

b. 36

c. 44

d. 50

e. 28

17. Questions

The ratio of A's age before 4 years to B's age before 4 years was 4:3 respectively. The present age of C is 55% less than the present ages of A and B together. If C's age after 6 years will be 60 years, then find the age of B after 8 years.

a. 42 years

b. 48 years

c. 56 years

d. 63 years

e. 60 years

18. Questions

The time taken by car to cover 4x km is equal to the time taken by bus to cover 3x km. The speed of the car is 20 km/hr more than that of the bus. If the time taken by bus to travel 10x km is 2.5 hours, then find the time taken by car to cover 4x km.

a. 40 minutes

b. 54 minutes

c. 45 minutes

d. 36 minutes

e. 42 minutes

19. Questions

The ratio of the total number of students in school P and Q is 5:7 respectively. The ratio of the number of boys to girls in school P is 7:3 respectively. The number of boys in Q is 75 more than that of girls in P. The number of girls in Q is 25 more than that of boys in P. Find the total number of boys in P and Q?

a. 216

b. 254

c. 288

d. 325

e. 360

20. Questions

Anu can either buy 25 erasers or 10 pencils from the money she has with her. If out of total amount the money spent by her on transportation is equal to the price of 9 erasers and she also buys 4 pencils, then find the number of erasers she can buy from the remaining money.

a. 18

b. 21

c. 6

d. 12

e. 8

21. Questions

'A', 'B' and 'C' individually can do some work in 30 days, 45 days and 60 days respectively. 'A' and B started working together and C joined them after 4 days. B left 4 days before the completion of the work. Find the total number of days for which A worked to complete the work?

a. 12 days

b. 16 days

c. 20 days

d. 24 days

e. 18 days

22. Questions

A bag contains x red, (x + 3) blue and 15 green balls. If the probability of getting a blue ball is 1/10 more than that of getting a red ball, then find the probability of getting two green balls?

a. 7/29

b. 51/141

c. 44/133

d. 50/141

e. 52/145

23. Questions

A right angle triangle with base of 7 cm and height 24 cm is rotated along its height. Find the total surface area of the cone which is formed?

a. 704 cm^2

b. 656 cm^2

c. 756 cm^2

d. 716 cm^2

e. 804 cm^2

24. Questions

The ratio of the speed of the boat and the speed of the stream is 3:1. If the ratio of time taken by the boat to cover (x + 38) km downstream to (x – 7) km upstream is 4:3, then find the value of x?

a. 28

b. 36

c. 34

d. 33

e. 32

25. Questions

A and B start the business with investments of Rs. 2x and Rs. 5400 respectively. After 6 months, both withdrew half of the amount. At the end of a year, the total profit is Rs. 4750 and the profit share of B is Rs. 2250. Find the initial investment of A?

a. Rs. 4200
b. Rs. 5400
c. Rs. 6000
d. Rs. 6600
e. Rs. 7200

26. Questions

What approximate value should come in the place of (?) in the following questions?

$(16.01)^2 - (11.87)^2 + 25.12 * ? = (37.68)^2 + (23.11)^2 - (19.17)^2$

a. 42
b. 56
c. 63
d. 60
e. 74

27. Questions

24.23 * 63.88 ÷ 8.85 * 35.67 ÷ 11.86 = 19.84% of ?

a. 2160
b. 2560
c. 3240
d. 1440
e. 1280

28. Questions

(24.88% of 12.02% of 5120.12) ÷ (39.99% of 60.11% of 45) = ? ÷ 54.12

a. 768
b. 784
c. 712
d. 770
e. 756

29. Questions

(122.85 + 249.11) ÷ 30.89 = (? – 390.08) ÷ 17.94

a. 333

b. 456

c. 606

d. 512

e. 586

30. Questions

33. 98% of 750 + 15.97% of 350 = $?^2$ - 13

a. 18

b. 14

c. 24

d. 8

e. 28

31. Questions

What value should come in the place of (?) in the following number series?

36, 49, 66, ?, 112, 141

a. 70

b. 77

c. 84

d. 87

e. 81

32. Questions

45, ?, 48, 56, 71, 95

a. 42

b. 45

c. 44

d. 40

e. 41

33. Questions

140, 103, 72, 43, ?, 1

a. 33

b. 24

c. 36

d. 16

e. 20

34. Questions

140, 172, 156, 164, 160, ?

a. 162

b. 161

c. 158

d. 156

e. 164

35. Questions

22, 34, 14, 44, 2, ?

a. 18

b. 36

c. 58

d. 44

e. 66

36. Questions

Following question contains two equations as I and II. You have to solve both equations and determine the relationship between them and give answer as,

I). $x^2 + 21x + 68 = 0$

II). $y^2 + 42y + 432 = 0$

a. $x \geq y$

b. $x \leq y$

c. $x < y$

d. x = y or the relation cannot be established

e. $x > y$

37. Questions

I). $x^2 - 7x - 120 = 0$

II). $2y^2 + 35y + 152 = 0$

a. $x > y$

b. $x \geq y$

c. $x < y$

d. $x = y$ or the relation cannot be established

e. $x \leq y$

38. Questions

I). $x^2 - 40x + 391 = 0$

II). $y^2 - 48y + 575 = 0$

a. $x > y$

b. $x \geq y$

c. $x \leq y$

d. $x = y$ or the relation cannot be established

e. $x < y$

39. Questions

I). $x^2 - 28x + 195 = 0$

II). $y^2 - 21y + 104 = 0$

a. $x > y$

b. $x \geq y$

c. $x < y$

d. $x = y$ or the relation cannot be established

e. $x \leq y$

40. Questions

I). $x^2 - 27x - 238 = 0$

II). $y^2 - 37y + 102 = 0$

a. $x > y$

b. $x \geq y$

c. $x \leq y$

d. $x < y$

e. $x = y$ or the relation cannot be established

Explanations:

1. Questions

From the graph,

$90° + X\% + 108° + Y\% + 36° = 360°$

$X\% + Y\% = 360° - 234°$

$X\% + Y\% = 126° * (100/360)$

$X\% + Y\% = 35\%$

$X + Y = 35$ ----> (1)

From note I,

$X – Y = 5$ -----> (2)

By solving equation (1) & (2), we get

$2X = 40$

$X = 20$

$Y = 35 – 20 = 15$

The percentage distribution of the number of sunglasses sold by Q and S is 20% and 15% respectively.

From note II,

Let the total number of sunglasses sold by five different outlets together be 100x

$100x * (15/100) = 360$

$15x = 360$

$x = 24$

The total number of sunglasses sold by five different outlets = $100 * 24 = 2400$

Outlets	The number of sunglasses sold
P	2400 * (90°/360°) = 600
Q	2400 * (20/100) = 480
R	2400 * (108°/360°) = 720
S	360
T	2400 * (36°/360°) = 240

Answer: B

The number of Aislin sunglasses sold by Q = 480 * (5/8) = 300

The number of Aislin sunglasses sold by P = 60 + 300 = 360

The number of chase sunglasses sold by P = 600 – 360 = 240

Required % = (240/2400) * 100 = 10%

2. Questions

From the graph,

90° + X% + 108° + Y% + 36° = 360°

X% + Y% = 360° - 234°

X% + Y% = 126° * (100/360)

X% + Y% = 35%

X + Y = 35 ----> (1)

From note I,

X – Y = 5 -----> (2)

By solving equation (1) & (2), we get

2X = 40

X = 20

Y = 35 – 20 = 15

The percentage distribution of the number of sunglasses sold by Q and S is 20% and 15% respectively.

From note II,

Let the total number of sunglasses sold by five different outlets together be 100x

100x * (15/100) = 360

15x = 360

x = 24

The total number of sunglasses sold by five different outlets = 100 * 24 = 2400

Outlets	The number of sunglasses sold
P	2400 * (90°/360°) = 600
Q	2400 * (20/100) = 480
R	2400 * (108°/360°) = 720
S	360
T	2400 * (36°/360°) = 240

Answer: D

Let the number of Royal son sunglasses sold by T be x

So, the number of Aislin sunglasses sold by T = 2x + x = 3x

The number of Aislin sunglasses sold by S = 3x – 30

According to the data,

x + 3x = 240

4x = 240

x = 60

The number of Aislin sunglasses sold by S = 3 * 60 – 30 = 180 – 30 = 150

The number of Royal son sunglasses sold by S = 360 – 150 = 210

3. Questions

From the graph,

90° + X% + 108° + Y% + 36° = 360°

X% + Y% = 360° - 234°

X% + Y% = 126° * (100/360)

X% + Y% = 35%

X + Y = 35 ----> (1)

From note I,

X – Y = 5 -----> (2)

By solving equation (1) & (2), we get

2X = 40

X = 20

Y = 35 – 20 = 15

The percentage distribution of the number of sunglasses sold by Q and S is 20% and 15% respectively.

From note II,

Let the total number of sunglasses sold by five different outlets together be 100x

100x * (15/100) = 360

15x = 360

x = 24

The total number of sunglasses sold by five different outlets = 100 * 24 = 2400

Outlets	The number of sunglasses sold
P	2400 * (90°/360°) = 600
Q	2400 * (20/100) = 480
R	2400 * (108°/360°) = 720
S	360
T	2400 * (36°/360°) = 240

Answer: A

The total number of sunglasses (Aislin + Royal son) sold by U = [1 + (25/100)] * 720 = (5/4) * 720 = 900

The number of Royal son sunglasses sold by U = 900 – 500 = 400

4. Questions

From the graph,

90° + X% + 108° + Y% + 36° = 360°

X% + Y% = 360° - 234°

X% + Y% = 126° * (100/360)

X% + Y% = 35%

X + Y = 35 ----> (1)

From note I,

X – Y = 5 -----> (2)

By solving equation (1) & (2), we get

2X = 40

X = 20

Y = 35 – 20 = 15

The percentage distribution of the number of sunglasses sold by Q and S is 20% and 15% respectively.

From note II,

Let the total number of sunglasses sold by five different outlets together be 100x

100x * (15/100) = 360

15x = 360

x = 24

The total number of sunglasses sold by five different outlets = 100 * 24 = 2400

Outlets	The number of sunglasses sold
P	2400 * (90°/360°) = 600
Q	2400 * (20/100) = 480
R	2400 * (108°/360°) = 720
S	360
T	2400 * (36°/360°) = 240

Answer: E

Let the number of Royal son sunglasses sold by Q, the number of Aislin sunglasses sold by Q and the number of Aislin sunglasses sold by S are 6x, 10x and 5x respectively.

6x + 10x = 480

16x = 480

x = 30

The number of Royal son sunglasses sold by Q = 6 * 30 = 180

The number of Aislin sunglasses sold by S = 5 * 30 = 150

The number of Royal son sunglasses sold by S = 360 – 150 = 210

The sum of the number of Royal son sunglasses sold by Q, S and W = 150 * 3 = 450

The number of Royal son sunglasses sold by W = 450 – 180 – 210 = 60

5. Questions

From the graph,

90° + X% + 108° + Y% + 36° = 360°

X% + Y% = 360° - 234°

X% + Y% = 126° * (100/360)

X% + Y% = 35%

X + Y = 35 ----> (1)

From note I,

X – Y = 5 -----> (2)

By solving equation (1) & (2), we get

2X = 40

X = 20

Y = 35 – 20 = 15

The percentage distribution of the number of sunglasses sold by Q and S is 20% and 15% respectively.

From note II,

Let the total number of sunglasses sold by five different outlets together be 100x

100x * (15/100) = 360

15x = 360

x = 24

The total number of sunglasses sold by five different outlets = 100 * 24 = 2400

Outlets	The number of sunglasses sold
P	2400 * (90°/360°) = 600
Q	2400 * (20/100) = 480
R	2400 * (108°/360°) = 720
S	360
T	2400 * (36°/360°) = 240

Answer: A

The number of Aislin sunglasses sold by P = 600 * (60/100) = 360

The number of Royal son sunglasses sold by Q = 480 * [1 - (62.5/100)] = 480 * (37.5/100) = 180

Required ratio = 360:180 = 2:1

6. Questions

In mall A,

The total number of bags sold = 50 * 10 = 500

The number of golf bags sold = 500 * (30/100) = 150

The number of tennis bags sold = 500 – 150 = 350

Similarly, we can calculate other values.

Malls	The total number of bags sold	The number of golf bags sold	The number of tennis bags sold
A	500	150	350
B	750	300	450
C	450	135	315
D	650	390	260
E	800	360	440

Answer: A

Let the number of golf and tennis bags unsold in D be 3x and 4x respectively.

Let the number of golf and tennis bags manufactured in D be 7y and 5y respectively.

7y – 3x = 390 ----> (1)

5y – 4x = 260 ----> (2)

By solving equation (1) * 4 and (2) * 3, we get

28y – 12x = 1560

15y – 12x = 780

13y = 780

y = 60

The value of y apply on equation (2), we get

5 * 60 – 4x = 260

300 – 260 = 4x

x = 10

The number of bags unsold in D = 3x + 4x = 7 * 10 = 70

7. Questions

In mall A,

The total number of bags sold = 50 * 10 = 500

The number of golf bags sold = 500 * (30/100) = 150

The number of tennis bags sold = 500 – 150 = 350

Similarly, we can calculate other values.

Malls	The total number of bags sold	The number of golf bags sold	The number of tennis bags sold
A	500	150	350
B	750	300	450
C	450	135	315
D	650	390	260
E	800	360	440

Answer: B

The number of gym bag sold in C = 570 – 450 = 120

The number of men's bought the bag in C = 570 – 190 = 380

The number of men's bought golf bag in C = 380 * 5/19 = 100

Required sum = 120 + 100 = 220

8. Questions

In mall A,

The total number of bags sold = 50 * 10 = 500

The number of golf bags sold = 500 * (30/100) = 150

The number of tennis bags sold = 500 – 150 = 350

Similarly, we can calculate other values.

Malls	The total number of bags sold	The number of golf bags sold	The number of tennis bags sold
A	500	150	350
B	750	300	450
C	450	135	315
D	650	390	260
E	800	360	440

Answer: E

The number of tennis bags sold in F = 315 * [1 + (320/100)] = 315 * (420/100) = 1323

Required difference = 1323 – 800 = 523

9. Questions

In mall A,

The total number of bags sold = 50 * 10 = 500

The number of golf bags sold = 500 * (30/100) = 150

The number of tennis bags sold = 500 – 150 = 350

Similarly, we can calculate other values.

Malls	The total number of bags sold	The number of golf bags sold	The number of tennis bags sold
A	500	150	350
B	750	300	450
C	450	135	315
D	650	390	260
E	800	360	440

Answer: B

The average number of golf bags sold in B and E = (300 + 360)/2 = 330

Required percentage = [(330 – 150)/150] * 100 = 120% more

10. Questions

In mall A,

The total number of bags sold = 50 * 10 = 500

The number of golf bags sold = 500 * (30/100) = 150

The number of tennis bags sold = 500 – 150 = 350

Similarly, we can calculate other values.

Malls	The total number of bags sold	The number of golf bags sold	The number of tennis bags sold
A	500	150	350
B	750	300	450
C	450	135	315
D	650	390	260
E	800	360	440

Answer: E

The total number of bags in mall A = 500 * (100/80) = 625

The total number of golf bags in mall A = 150 + 10 = 160

The total number of tennis bags in mall A = 625 – 160 = 465

11. Questions

According to the data,

The total number of firecrackers sold by seller M = 300 * (7/6) = 350

The total number of firecrackers sold by seller O = 300 * (8/6) = 400

Let the number of sparklers sold by seller N be x.

So, the number of wheels sold by seller N = x – 140

x + x – 140 = 300

2x = 440

x = 220

The number of sparklers sold by seller N = 220

The number of wheels sold by seller N = 220 – 140 = 80

The number of wheels sold by seller M = 220 * (9/11) = 180

The number of wheels sold by seller O = 180 * (5/6) = 150

The number of sparklers sold by seller M = 350 – 180 = 170

The number of sparklers sold by seller O = 400 – 150 = 250

Sellers	The total number of firecrackers sold	The number of sparklers sold	The number of wheels sold
M	350	170	180
N	300	220	80
O	400	250	150

Answer: E

The number of rockets sold by M = 350 – 75 = 275

The ratio of the number of rockets sold by M to the number of sparklers sold by O = 275:250 = 11:10

According to the data,

(x + 6) = 11

x = 11 – 6

x = 5

12. Questions

According to the data,

The total number of firecrackers sold by seller M = 300 * (7/6) = 350

The total number of firecrackers sold by seller O = 300 * (8/6) = 400

Let the number of sparklers sold by seller N be x.

So, the number of wheels sold by seller N = x – 140

x + x – 140 = 300

2x = 440

x = 220

The number of sparklers sold by seller N = 220

The number of wheels sold by seller N = 220 – 140 = 80

The number of wheels sold by seller M = 220 * (9/11) = 180

The number of wheels sold by seller O = 180 * (5/6) = 150

The number of sparklers sold by seller M = 350 – 180 = 170

The number of sparklers sold by seller O = 400 – 150 = 250

Sellers	The total number of firecrackers sold	The number of sparklers sold	The number of wheels sold
M	350	170	180
N	300	220	80
O	400	250	150

Answer: B

The sum of the number of bomb and rockets sold by N = 260 – 80 = 180

The number of rockets sold by N = 180 * (1/3) = 60

Required difference = 170 – 60 = 110

13. Questions

According to the data,

The total number of firecrackers sold by seller M = 300 * (7/6) = 350

The total number of firecrackers sold by seller O = 300 * (8/6) = 400

Let the number of sparklers sold by seller N be x.

So, the number of wheels sold by seller N = x – 140

x + x – 140 = 300

2x = 440

x = 220

The number of sparklers sold by seller N = 220

The number of wheels sold by seller N = 220 – 140 = 80

The number of wheels sold by seller M = 220 * (9/11) = 180

The number of wheels sold by seller O = 180 * (5/6) = 150

The number of sparklers sold by seller M = 350 – 180 = 170

The number of sparklers sold by seller O = 400 – 150 = 250

Sellers	The total number of firecrackers sold	The number of sparklers sold	The number of wheels sold
M	350	170	180
N	300	220	80
O	400	250	150

Answer: D

The total number of firecrackers (wheels + sparklers) sold by P = 400 * [1 + (16/100)] = 4 * 116 = 464

The number of sparklers sold by P = 180 + 32 = 212

The number of wheels sold by P = 464 – 212 = 252

14. Questions

According to the data,

The total number of firecrackers sold by seller M = 300 * (7/6) = 350

The total number of firecrackers sold by seller O = 300 * (8/6) = 400

Let the number of sparklers sold by seller N be x.

So, the number of wheels sold by seller N = x – 140

x + x – 140 = 300

2x = 440

x = 220

The number of sparklers sold by seller N = 220

The number of wheels sold by seller N = 220 – 140 = 80

The number of wheels sold by seller M = 220 * (9/11) = 180

The number of wheels sold by seller O = 180 * (5/6) = 150

The number of sparklers sold by seller M = 350 – 180 = 170

The number of sparklers sold by seller O = 400 – 150 = 250

Sellers	The total number of firecrackers sold	The number of sparklers sold	The number of wheels sold
M	350	170	180
N	300	220	80
O	400	250	150

Answer: C

Let the cost price of wheels by M be Rs. x

According to the data,

100 * 170 + 180 * x = 31400

180 * x = 31400 – 17000

180x = 14400

x = 80

Required cost price = Rs. 80

15. Questions

According to the data,

The total number of firecrackers sold by seller M = 300 * (7/6) = 350

The total number of firecrackers sold by seller O = 300 * (8/6) = 400

Let the number of sparklers sold by seller N be x.

So, the number of wheels sold by seller N = x – 140

x + x – 140 = 300

2x = 440

x = 220

The number of sparklers sold by seller N = 220

The number of wheels sold by seller N = 220 – 140 = 80

The number of wheels sold by seller M = 220 * (9/11) = 180

The number of wheels sold by seller O = 180 * (5/6) = 150

The number of sparklers sold by seller M = 350 – 180 = 170

The number of sparklers sold by seller O = 400 – 150 = 250

Sellers	The total number of firecrackers sold	The number of sparklers sold	The number of wheels sold
M	350	170	180
N	300	220	80
O	400	250	150

Answer: C

The sum of the number of sparklers sold by M, N and O together = 170 + 220 + 250 = 640

The sum of the number of wheels sold by M, N and O together = 180 + 80 + 150 = 410

Required difference = 640 – 410 = 230

16. Questions

Answer: D

According to the question,

(108 + x)/48 = 7/3

108 + x = 7 * 16

x = 112 – 108

x = 4

The quantity of milk = 108 + 4 = 112 litres

The quantity of water = 48 litres

The ratio of quantity of milk and water = 112:48 = 7:3

The quantity of milk taken out = y * (7/10) = 0.7y litres

The quantity of water taken out = y * (3/10) = 0.3y litres

(112 – 0.7y)/ (48 – 0.3y + 2) = 11/5

560 – 3.5y = (50 – 0.3y) * 11

560 – 550 = 3.5y – 3.3y

10 = 0.2y

y = 50

17. Questions

Answer: E

Let the age of A before 4 years and age of B before 4 years be 4x years and 3x years respectively.

The present age of A = (4x + 4) years

The present age of B = (3x + 4) years

The present age of C = 60 – 6 = 54 years

According to the question,

54 = [1 - (55/100)] * [(4x + 4) + (3x + 4)]

54 = (45/100) * [7x + 8]

6 = (5/100) * (7x + 8)

120 – 8 = 7x

x = 112/7

x = 16

The present age of B = 3 * 16 + 4 = 52 years

The age of B after 8 years = 52 + 8 = 60 years

18. Questions

Answer: C

Let the speed of bus be y km/hr

So, the speed of the car = (y + 20) km/hr

According to the question,

4x/ (y + 20) = 3x/y

4y = 3y + 60

y = 60

The speed of a bus = 60 km/hr

The speed of a car = 60 + 20 = 80 km/hr

10x/60 = 2.5

x = 2.5 * 6

x = 15

Required time taken = 4 * 15/80 = 45 minutes

19. Questions

Answer: D

Let the total number of students in P be 10x.

So, the total number of students in Q = 10x * (7/5) = 14x

The number of boys in P = 10x * (7/10) = 7x

The number of girls in P = 10x * (3/10) = 3x

The number of boys in Q = 75 + 3x

The number of girls in Q = 25 + 7x

According to the question,

75 + 3x + 25 + 7x = 14x

100 = 14x – 10x

4x = 100

x = 25

The number of boys in P = 7 * 25 = 175

The number of boys in Q = 75 + 3 * 25 = 75 + 75 = 150

The total number of boys in P and Q = 175 + 150 = 325

20. Questions

Answer: C

According to the question,

Price of 25 erasers = Price of 10 Pencils

So, the ratio of price of 1 pencil to that of 1 eraser = 5:2

Let the price of 1 pencil be Rs. 5x

So, the price of 1 eraser = (2/5) * 5x = Rs. 2x

The total money she has with her = 5x * 10 = Rs. 50x

The money spent on transportation = 9 * 2x = Rs. 18x

Price of 4 pencils = 4 * 5x = Rs. 20x

Remaining money = 50x - (18x + 20x) = Rs. 12x

The number of erasers she can buy from the remaining money = 12x/2x = 6

21. Questions

Answer: B

Let the total work be 180 units [L.C.M (30, 45, 60)]

So, the efficiency of A = 180/30 = 6 units/day

The efficiency of B = 180/45 = 4 units/day

The efficiency of C = 180/60 = 3 units/day

So, A and B worked together for first 4 days = (6 + 4) * 4 = 40 units

The work done in last 4 days = (6 + 3) * 4 = 36 units

So, the remaining work done by A, B and C = 180 - (40 + 36) = 104 units

The number of days for which A, B and C worked together = 104/ (6+4+3) = 8 days

So, The total number of days for which A worked to complete the work = 4 + 8 + 4 = 16 days

22. Questions

Answer: A

The total number of balls in the bag = x + x + 3 + 15 = (2x + 18) balls

According to the question,

(x + 3)/ (2x + 18) – x/ (2x + 18) = 1/10

3/ (2x + 18) = 1/10

30 = 2x + 18

2x = 12

x = 6

The total number of balls in the bag = (2 * 6) + 18 = 12 + 18 = 30 balls

The probability of getting two green balls = $^{15}C_2$/ $^{30}C_2$

= (15 * 14)/ (30 * 29) = (3 * 17)/ (5 * 29) = 7/29

23. Questions

Answer: A

Slant height of the cone = hypotenuse of the triangle = $\sqrt{(7^2 + 24^2)} = \sqrt{625} = 25$ cm

Triangle is rotated along its height.

So, the radius of cone formed = base of the triangle = 7 cm

The height of the cone formed = height of the triangle = 24 cm

Total surface area of the cone = $\pi r^2 + \pi rl$

= (22/7) * 7 [7 + 25]

= 22 * 32 = 704 cm^2

24. Questions

Answer: C

Let the speed of the boat and speed of stream be 3y km/hr and y km/hr respectively.

According to the question,

{(x + 38)/ (3y + y)}/ {(x – 7)/ (3y – y)} = 4/3

{(x + 38)/4y} / {(x – 7)/ 2y} = 4/3

{(x + 38)/2} * 3 = (x – 7) * 4

3x + 114 = 8x – 56

5x = 170

x = 34

25. Questions

Answer: C

According to the question,

The investment ratio of A to B = [(2x * 6) + (x * 6)]: [(5400 * 6) + (2700 * 6)]

= 3x: 8100 = x: 2700

The profit share of A = 4750 – 2250 = Rs. 2500

x/ 2700 = 2500/2250

x/ 2700 = 10/9

x = 3000

Initial investment by A = 2 * 3000 = Rs. 6000

26. Questions

Answer: D

$(16.01)^2 - (11.87)^2 + 25.12 * ? = (37.68)^2 + (23.11)^2 - (19.17)^2$

$16^2 - 12^2 + 25 * ? = 38^2 + 23^2 - 19^2$

256 – 144 + 25 * ? = 1444 + 529 – 361

112 + 25 * ? = 1612

25 * ? = 1612 – 112

25 * ? = 1500

? = 60

Hence, option D

27. Questions

Answer: B

24.23 * 63.88 ÷ 8.85 * 35.67 ÷ 11.86 = 19.84% of ?

24 * 64 ÷ 9 * 36 ÷ 12 = (20/100) * ?

64 * 8 = (1/5) * ?

? = 2560

Hence, option B

28. Questions

Answer: A

(24.88% of 12.02% of 5120.12) ÷ (39.99% of 60.11% of 45) = ? ÷ 54.12

(25% of 12% of 5120) ÷ (40% of 60% of 45) = ? ÷ 54

{(1/4) * (12/100) * 5120}/ {(2/5) * (3/5) * 45} = ?/54

{(3/10) * 512}/ {(2 * 3 * 9)/5} = ?/54

128 * 6 = ?

? = 768

Hence, option A

29. Questions

Answer: C

(122.85 + 249.11) ÷ 30.89 = (? – 390.08) ÷ 17.94

(123 + 249) ÷ 31 = (? – 390) ÷ 18

372/31 * 18 = (? – 390)

12 * 18 + 390 = ?

? = 606

Hence, option C

30. Questions

Answer: A

33. 98% of 750 + 15.97% of 350 = $?^2$ - 13

34% of 750 + 16% of 350 = $?^2$ - 13

255 + 56 + 13 = $?^2$

$?^2$ = 324

? = 18

Hence, option A

31. Questions

Answer: D

The given series follows the following pattern: Common difference

36 49 66 **87** 112 141

+13 +17 +21 +25 +29

+4 +4 +4 +4

Hence, option D

32. Questions

Answer: B

The given series follows the following pattern:

45 + 1^2 - 1 = 45

45 + 2^2 - 1 = 48

48 + 3^2- 1 = 56

56 + 4^2 - 1 = 71

71 + 5^2 - 1 = 95

Hence, option B

33. Questions

Answer: E

The given series follows the following pattern: difference of prime numbers

140 – 37 = 103

103 – 31 = 72

72 – 29 = 43

43 – 23 = 20

20 – 19 = 1

Hence, option E

34. Questions

Answer: A

The given series follows the following pattern:

140 + 32 = 172

172 – 16 = 156

156 + 8 = 164

164 – 4 = 160

160 + 2 = 162

Hence, option A

35. Questions

Answer: C

The given series follows the following pattern:

22 + (3 * 4) = 34

34 - (4 * 5) = 14

14 + (5 * 6) = 44

44 - (6 * 7) = 2

2 + (7 * 8) = 58

Hence, option C

36. Questions

Answer: E

From I,

$x^2 + 21x + 68 = 0$

$x^2 + 17x + 4x + 68 = 0$

$x (x + 17) + 4 (x + 17) = 0$

$(x + 17) (x + 4) = 0$

$x = -17, -4$

From II,

$y^2 + 42y + 432 = 0$

$y^2 + 24y + 18y + 432 = 0$

$y (y + 24) + 18 (y + 24) = 0$

$(y + 24) (y + 18) = 0$

$y = -24, -18$

X	relation	y
-17	>	-24
-17	>	-18
-4	>	-24
-4	>	-18

So, $x > y$

Hence, option E

37. Questions

Answer: B

From I,

$x^2 - 7x - 120 = 0$

$x^2 - 15x + 8x - 120 = 0$

$x (x - 15) + 8 (x - 15) = 0$

$(x - 15) (x + 8) = 0$

$x = +15, -8$

From II,

$2y^2 + 35y + 152 = 0$

$2y^2 + 16y + 19y + 152 = 0$

$2y (y + 8) + 19 (y + 8) = 0$

$(y + 8) (2y + 19) = 0$

$y = -8, -19/2$

X	relation	y
+15	>	-8
+15	>	-19/2
-8	=	-8
-8	>	-19/2

So, $x \geq y$

Hence, option B

38. Questions

Answer: C

From I,

$x^2 - 40x + 391 = 0$

$x^2 - 23x - 17x + 391 = 0$

$x(x - 23) - 17(x - 23) = 0$

$(x - 23)(x - 17) = 0$

$x = +23, +17$

From II,

$y^2 - 48y + 575 = 0$

$y^2 - 23y - 25y + 575 = 0$

$y(y - 23) - 25(y - 23) = 0$

$(y - 23)(y - 25) = 0$

$y = +23, +25$

x	relation	y
+23	=	+23
+23	<	+25
+17	<	+23
+17	<	+25

So, $x \leq y$

Hence, option C

39. Questions

Answer: B

From I,

$x^2 - 28x + 195 = 0$

$x^2 - 13x - 15x + 195 = 0$

$x(x - 13) - 15(x - 13) = 0$

$(x - 15)(x - 13) = 0$

x = +15, +13

From II,

$y^2 - 21y + 104 = 0$

$y^2 - 13y - 8y + 104 = 0$

$y (y - 13) - 8 (y - 13) = 0$

$(y - 13) (y - 8) = 0$

y = +13, +8

x	relation	y
+15	>	+13
+15	>	+8
+13	=	+13
+13	>	+8

So, $x \geq y$

Hence, option B

40. Questions

Answer: E

From I,

$x^2 - 27x - 238 = 0$

$x^2 - 34x + 7x - 238 = 0$

$x (x - 34) + 7 (x - 34) = 0$

$(x - 34) (x + 7) = 0$

x = +34, -7

From II,

$y^2 - 37y + 102 = 0$

$y^2 - 34y - 3y + 102 = 0$

$y (y - 34) - 3 (y - 34) = 0$

$(y - 34) (y - 3) = 0$

y = +34, +3

x	relation	y
+34	=	+34
+34	>	+3
-7	<	+34
-7	<	+3

So, the relation between x and y cannot be determined.

Hence, option E