1. Questions

Study the following information carefully and answer the questions.

The given table chart shows the percentage distribution of the total number of restaurants (North Indian + South Indian) in five different cities namely A, B, C, D and E and also given the number of North Indian restaurants in these five cities.

Cities	% distribution of the total number of restaurants	The number of North Indian restaurants
A	22%	1640
B	13%	800
C	20%	1300
D	15%	900
E	30%	1500

Note: The difference between the total number of restaurants in City A and City D is 840.

In City B, there are two types of restaurants: type P and type Q. If the ratio of the number of type P North Indian to South Indian restaurants in City B is 1:1 and the ratio of the number of type Q North Indian to South Indian restaurants in City B is 10:9, then find the number of type P North Indian restaurants in City B.

a. 200

b. 300

c. 500

d. 400

e. 250

2. Questions

If the number of Canadian restaurants in City B is 5/2 of the number of North Indian restaurants in that City and the ratio of the number of Canadian restaurants in City B to City C is 4:1, then find the difference between the number of Canadian restaurants in City C and the number of North Indian restaurants in City D.

a. 800

b. 400

c. 200

d. 900

e. 650

3. Questions

The total number of (North Indian + South Indian)restaurants in City F is 30 less than that of City A. If the total number of restaurants in City F is x% more than that of City D and the ratio of the number of North Indian to South Indian restaurants in City F is (x/9):1, then find the number of North Indian restaurants in City F.

a. 2550

b. 1890

c. 2175

d. 2490

e. 1790

4. Questions

Find the average number of North Indian restaurants in City A and the number of South Indian restaurants in City C.

a. 1450

b. 1420

c. 1370

d. 1650

e. 1990

5. Questions

Find the ratio of the number of North Indian restaurants in City C to the number of South Indian restaurants in City D.

a. 9:13

b. 13:9

c. 7:9

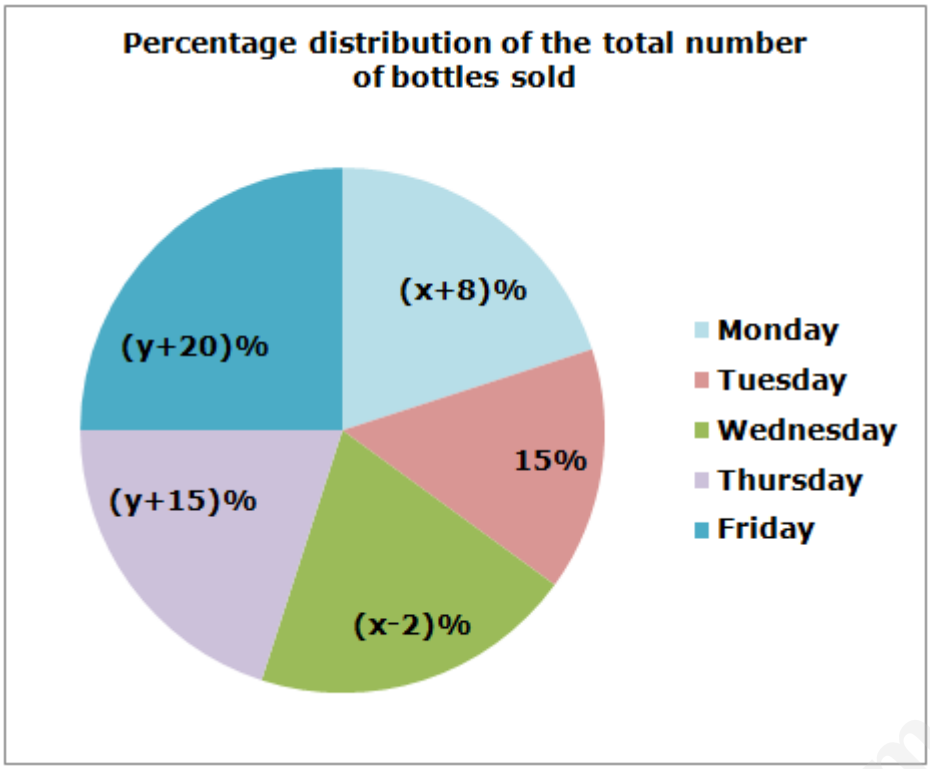
d. 5:7

e. 11:17

6. Questions

Study the following information carefully and answer the questions.

The given pie chart shows the percentage distribution of the total number of bottles(Red + Black) sold on five different days namely Monday, Tuesday, Wednesday, Thursday and Friday.



Note:

i). $18 * x^2 = 432 * 6$

ii). The difference between the total number of bottles sold on Monday and Friday is 400.

If the number of red bottles sold on Monday is 52% of the total number of bottles sold on Friday and the number of red bottles sold on Tuesday is 7/10th of the total number of bottles sold on Wednesday, then find the average number of black bottles sold on Monday and Tuesday.

a. 380

b. 172

c. 248

d. 168

e. 256

7. Questions

Out of the total number of bottles sold on Wednesday, 45% were sold to females and the rest were sold to males. The ratio of the number of red and black bottles sold for males to females on Wednesday is 7:6 and 2:1.5 respectively. Find the number of black bottles sold for females on Wednesday.

a. 50

b. 60

c. 120

d. 80

e. 160

8. Questions

Out of the total number of bottles sold on Saturday, (x + y + 20)% are defective bottles. If the total number of bottles sold on Saturday is equal to the average number of bottles sold on Tuesday and Thursday together, then find the number of non-defective bottles sold on Saturday.

a. 264

b. 356

c. 464

d. 680

e. 290

9. Questions

If the total number of bottles sold on Tuesday is decreased by (x-y)%, then find 25% of the number of bottles sold on Tuesday after the decrease.

a. 153

b. 123

c. 167

d. 147

e. 198

10. Questions

The total number of bottles sold on Tuesday and Friday together is what percentage more/less than the total number of bottles sold on Monday.

a. 100% less

b. 220% more

c. 300% less

d. 250% more

e. 125% more

11. Questions

Read the following information carefully and answer the questions.

A certain number of people (males + females) ordered food on Zomato, Swiggy, and Uber. The number of females who ordered food on Swiggy is 25% more than the number of males who ordered food on Zomato

and the number of females who ordered food on Uber is 60% of the number of males who ordered food on Zomato. The number of males who ordered food on Uber is 20% less than the number of females who ordered food on Swiggy. The ratio of the number of males to females who ordered food on Zomato is 3:2 and the number of males who ordered food on Swiggy is 10 more than the number of females who ordered food on Zomato. The number of females who ordered food on Uber is 72.

Out of the total number of people who ordered food on Zomato, 35% ordered veg food and the ratio of the number of males who ordered veg to non-veg food on Zomato is 1:4. Find the number of females who ordered non-veg food on Zomato.

a. 45
b. 34
c. 20
d. 56
e. 80

12. Questions

Out of the total number of people who ordered food on Swiggy, x% used coupons and the rest did not use any coupons. The number of females who did not use any coupons on Swiggy is 90, which is 54 more than the number of males who used coupons on Swiggy. Find the value of x.

a. 35
b. 60
c. 20
d. 40
e. 55

13. Questions

Find the ratio of the number of males who ordered food on Uber to the number of females who ordered food on Zomato.

a. 4:5
b. 3:2
c. 6:7
d. 11:6
e. 2:7

14. Questions

The total number of people who ordered food on Uber is what percentage of the total number of people who ordered food on Swiggy?

a. 70%

b. 50%

c. 80%

d. 45%

e. 60%

15. Questions

Find 40% of the total number of males who ordered food on Zomato and Swiggy together.

a. 96

b. 112

c. 84

d. 72

e. 56

16. Questions

A man invested a certain sum in compound interest at 20% per annum for 3 years and obtained an interest of Rs.x. If he invested Rs.(x + 80) in compound interest at 20% per annum compounded half-yearly for one year, then the amount becomes Rs. 13310. Find the sum amount.

a. Rs. 18000

b. Rs. 15000

c. Rs. 22000

d. Rs. 12000

e. Rs. 24000

17. Questions

The upstream speed of the boat is 300% more than the speed of the stream. The boat can cover336 km downstream in (26 - y) hours and the same boat covers 192 km upstream in y hours. Find the upstream speed of the boat.

a. 16 km/hr

b. 20 km/hr

c. 12 km/hr

d. 26 km/hr

e. 10 km/hr

18. Questions

The present age of D is n times the present age of A. The ratio of the present age of B to C is 5:6 and the present age of A is twice the present age of B. The age of B after three years is equal to the present age of C. If the ratio of the present age of C to D is 2:5, then find the value of n.

a. 2.5
b. 2.8
c. 1.5
d. 3.2
e. 3.3

19. Questions

Train A can travel a distance of 320 km in 16 hours at a speed of x km/hr. Train B travels a distance without stoppages at the speed of (x+30) km/hr and with stoppages at the speed of (x+20) km/hr. Find the sum of the time taken by train B to cover 200 km with stoppages and the same distance without stoppages.

a. 9 hours
b. 10 hours
c. 20 hours
d. 15 hours
e. 4 hours

20. Questions

'x' number of women can finish a piece of work in six days. If there were 20 women less, it would take 4 days more to finish the work. If (x-10) children and 30 men can complete a piece of work in 12 days, while (x-20) children and 10 men can complete the same work in 18 days, then find the ratio of the efficiency of a child to a man.

a. 5 :1
b. 7:2
c. 3:1
d. 2:1
e. 9:7

21. Questions

The area of the rectangle is 72 cm^2 and its length and breadth are (x + 6) cm and x cm respectively. The perimeter of the square is (x+19)% more than the length of the rectangle. If the perimeter of the square is increased by 1 cm, then find the new area of the square.

a. 36 cm^2

b. 24 cm^2

c. 32 cm^2

d. 16 cm^2

e. 20 cm^2

22. Questions

A mixture contains 175 litres of milk and water in the ratio of 4:1. If (25+x) litres of milk and x litres of water are added to the mixture, then the ratio of water to milk in the final mixture becomes 1:3. Find the value of x.

a. 35

b. 42

c. 30

d. 55

e. 20

23. Questions

A secured x% of the total marks and failed by 40 marks and B secured by (x+ 10)% of the total marks and his marks are 60 more than the pass marks. If the total marks secured by A is 400, then find the value of x.

a. 60

b. 45

c. 30

d. 40

e. 35

24. Questions

A and B entered into a partnership by investing Rs.280 and Rs.520, respectively. After 2 months, A increased his investment by Rs.120 and C joined them with an investment of Rs.300. At the end of one year, the profit share of C is Rs.600. Find the sum of the profit share of A and B.

a. Rs. 1712

b. Rs. 2160

c. Rs. 2880

d. Rs. 1645

e. Rs. 1760

25. Questions

A shopkeeper bought wheat at a rate of Rs.450 per kg and the marked price of the wheat is Rs.50 more than its cost price. He sold at offering a discount of 5%. The dishonest seller cheats by removing 100 grams per kg on actual selling. Find the difference between actual profit percentage and dishonest profit percentage.

a. $5\frac{5}{9}\%$

b. 55/9%

c. 100/9%

d. None of these

26. Questions

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

25% of 160 + √169 + 32 = ? * 5

a. 21

b. 17

c. 16

d. 24

e. 19

27. Questions

115 + 289 - ? = 20% of 700 – 43 + 6

a. 337

b. 414

c. 301

d. 512

e. 298

28. Questions

40% of 230 – (12.5% of 104 + 18) = ?

a. 51

b. 32

c. 61

d. 55

e. 43

29. Questions

1500 ÷ 30 + ? ÷ 2 = 80 * 12 ÷ 4 + 12

a. 410

b. 503

c. 212

d. 404

e. 250

30. Questions

? * 3 + 115 – 70 = 91 * √225 ÷ 13

a. 15

b. 20

c. 8

d. 11

e. 14

31. Questions

Find out the wrong number in the following number series.

2196, 1328, 726, 340, 122

a. 122

b. 726

c. 1328

d. 2196

e. 340

32. Questions

34, 47, 73, 112, 168

a. 168

b. 47

c. 73

d. 34

e. 112

33. Questions

90, 720, 120, 490, 240

a. 720

b. 240

c. 120

d. 90

e. 490

34. Questions

133, 228, 353, 523, 741

a. 353

b. 133

c. 741

d. 228

e. 523

35. Questions

8, 16, 10, 18, 14, 20

a. 20

b. 14

c. 18

d. 16

e. 8

36. Questions

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

I). $4x^2 + 40x + 96 = 0$

II). $5y^2 + 30y + 25 = 0$

a. $x > y$

b. $x \geq y$

c. $x = y$ or relationship can't be determined

d. $x < y$

e. $x \leq y$

37. Questions

I). $x^2 - 11x - 102 = 0$

II). $y^2 - 36y + 323 = 0$

a. $x > y$

b. $x \geq y$

c. $x = y$ or relationship can't be determined

d. $x < y$

e. $x \leq y$

38. Questions

I). $y^2 + 12y + 32 = 0$

II). $x^2 + 54x + 405 = 0$

a. $x > y$

b. $x \geq y$

c. $x = y$ or relationship can't be determined.

d. $x < y$

e. $x \leq y$

39. Questions

I). $x^2 - 38x + 165 = 0$

II). $2y^2 + 39y - 63 = 0$

a. $x > y$

b. $x \geq y$

c. $x = y$ or relationship can't be determined.

d. $x < y$

e. $x \leq y$

40. Questions

I). $4y^2 - 16y + 15 = 0$

II). $2x^2 - 13x + 20 = 0$

a. $x > y$

b. $x \geq y$

c. $x = y$ or relationship can't be determined

d. $x < y$

e. $x \leq y$

Explanations:

1. Questions

The total number of restaurants in all five cities together = 840 * 100/(22 – 15) = 840 * 100/7 = 12000

The total number of restaurants in City A = 12000 * 22/100 = 2640

The number of North Indian restaurants in City A = 1640

The number of South Indian restaurants in City A = 2640 – 1640 = 1000

Similarly, we can calculate other values.

Cities	The total number of restaurants	The number of North Indian restaurants	The number of South Indian restaurants
A	2640	1640	1000
B	1560	800	760
C	2400	1300	1100
D	1800	900	900
E	3600	1500	2100

Answer: D

Let the number of type P North and South Indian restaurants in City B be x each.

Let the number of type Q North and South Indian restaurants in City B be 10y and 9y respectively.

$x + 10y = 800$ ---------> (2)

$x + 9y = 760$ -------> (2)

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

y = 40

x = 400

The number of type P North Indian restaurants in City B = 400

2. Questions

The total number of restaurants in all five cities together = 840 * 100/(22 – 15) = 840 * 100/7 = 12000

The total number of restaurants in City A = 12000 * 22/100 = 2640

The number of North Indian restaurants in City A = 1640

The number of South Indian restaurants in City A = 2640 – 1640 = 1000

Similarly, we can calculate other values.

Cities	The total number of restaurants	The number of North Indian restaurants	The number of South Indian restaurants
A	2640	1640	1000
B	1560	800	760
C	2400	1300	1100
D	1800	900	900
E	3600	1500	2100

Answer: B

The number of Canadian restaurants in City B = 800 * 5/2 = 2000

The number of Canadian restaurants in City C = 2000 * 1/4 = 500

The number of North Indian restaurants in City D = 900

Required difference = 900 – 500 = 400

3. Questions

The total number of restaurants in all five cities together = 840 * 100/(22 – 15) = 840 * 100/7 = 12000

The total number of restaurants in City A = 12000 * 22/100 = 2640

The number of North Indian restaurants in City A = 1640

The number of South Indian restaurants in City A = 2640 – 1640 = 1000

Similarly, we can calculate other values.

Cities	The total number of restaurants	The number of North Indian restaurants	The number of South Indian restaurants
A	2640	1640	1000
B	1560	800	760
C	2400	1300	1100
D	1800	900	900
E	3600	1500	2100

Answer: C

The total number of restaurants in City F = 2640 – 30 = 2610

2610 = 1800 * (100 + x)/100

2610 * 100/1800 = 100 + x

x = 145 - 100

x = 45

The ratio of the number of North Indian to South Indian restaurants in City F = (45/9):1 = 5:1

The number of North Indian restaurants in City F = 2610 * 5/6 = 2175

4. Questions

The total number of restaurants in all five cities together = 840 * 100/(22 – 15) = 840 * 100/7 = 12000

The total number of restaurants in City A = 12000 * 22/100 = 2640

The number of North Indian restaurants in City A = 1640

The number of South Indian restaurants in City A = 2640 – 1640 = 1000

Similarly, we can calculate other values.

Cities	The total number of restaurants	The number of North Indian restaurants	The number of South Indian restaurants
A	2640	1640	1000
B	1560	800	760
C	2400	1300	1100
D	1800	900	900
E	3600	1500	2100

Answer: C

The number of North Indian restaurants in City A = 1640

The number of South Indian restaurants in City C = 1100

Required average = (1640 + 1100)/2 = 2740/2 = 1370

5. Questions

The total number of restaurants in all five cities together = 840 * 100/(22 – 15) = 840 * 100/7 = 12000

The total number of restaurants in City A = 12000 * 22/100 = 2640

The number of North Indian restaurants in City A = 1640

The number of South Indian restaurants in City A = 2640 – 1640 = 1000

Similarly, we can calculate other values.

Cities	The total number of restaurants	The number of North Indian restaurants	The number of South Indian restaurants
A	2640	1640	1000
B	1560	800	760
C	2400	1300	1100
D	1800	900	900
E	3600	1500	2100

Answer: B

The number of North Indian restaurants in City C = 1300

The number of South Indian restaurants in City D = 900

Required ratio = 1300:900 = 13:9

6. Questions

$x^2 = (432 * 6)/18 = 144 = 12^2$

x = 12

The percentage of the total number of bottles sold on Monday = 12 + 8 = 20%

The percentage of the total number of bottles sold on Wednesday = 12 – 2 = 10%

20% + 15% + 10% + (y + 15)% + (y + 20)% = 100%

2y = 100 – 80

y = 20/2 = 10

The total number of bottles sold on all days together = 400 * 100/(30 – 20) = 4000

The total number of bottles sold on Monday = 4000 * 20/100 = 800

The total number of bottles sold on Tuesday = 4000 * 15/100 = 600

The total number of bottles sold on Wednesday = 4000 * 10/100 = 400

The total number of bottles sold on Thursday = 4000 * 25/100 = 1000

The total number of bottles sold on Friday = 4000 * 30/100 = 1200

Answer: C

The number of red bottles sold on Monday = 1200 * 52/100 = 624

The number of black bottles sold on Monday = 800 – 624 = 176

The number of red bottles sold on Tuesday = 400 * 7/10 = 280

The number of black bottles sold on Tuesday = 600 – 280 = 320

Required average = (176 + 320)/2 = 496/2 = 248

7. Questions

$x^2 = (432 * 6)/18 = 144 = 12^2$

x = 12

The percentage of the total number of bottles sold on Monday = 12 + 8 = 20%

The percentage of the total number of bottles sold on Wednesday = 12 – 2 = 10%

20% + 15% + 10% + (y + 15)% + (y + 20)% = 100%

2y = 100 – 80

y = 20/2 = 10

The total number of bottles sold on all days together = 400 * 100/(30 – 20) = 4000

The total number of bottles sold on Monday = 4000 * 20/100 = 800

The total number of bottles sold on Tuesday = 4000 * 15/100 = 600

The total number of bottles sold on Wednesday = 4000 * 10/100 = 400

The total number of bottles sold on Thursday = 4000 * 25/100 = 1000

The total number of bottles sold on Friday = 4000 * 30/100 = 1200

Answer: B

The total number of bottles sold on Wednesday = 400

The total number of bottles sold for females on Wednesday = 400 * 45/100 = 180

The total number of bottles sold for males on Wednesday = 400 - 180 = 220

Let the number of red bottles sold for males and females on Wednesday be 7x and 6x respectively.

Let the number of black bottles sold for males on Wednesday be 4y.

And the number of black bottles sold for females on Wednesday = 4y * 1.5/2 = 3y

7x + 4y = 220 ------->(1)

6x + 3y = 180 -------> (2)

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

x = 20, y = 20

The number of black bottles sold for females on Wednesday = 3 * 20 = 60

8. Questions

$x^2 = (432 * 6)/18 = 144 = 12^2$

x = 12

The percentage of the total number of bottles sold on Monday = 12 + 8 = 20%

The percentage of the total number of bottles sold on Wednesday = 12 – 2 = 10%

20% + 15% + 10% + (y + 15)% + (y + 20)% = 100%

2y = 100 – 80

y = 20/2 = 10

The total number of bottles sold on all days together = 400 * 100/(30 – 20) = 4000

The total number of bottles sold on Monday = 4000 * 20/100 = 800

The total number of bottles sold on Tuesday = 4000 * 15/100 = 600

The total number of bottles sold on Wednesday = 4000 * 10/100 = 400

The total number of bottles sold on Thursday = 4000 * 25/100 = 1000

The total number of bottles sold on Friday = 4000 * 30/100 = 1200

Answer: C

The total number of bottles sold on Saturday = (1000+ 600)/2 = 800

The percentage of the number of defective bottles sold on Saturday = 12 + 10 + 20 = 42%

The number of non-defective bottles sold on Saturday = 800 * 58/100 = 464

9. Questions

$x^2 = (432 * 6)/18 = 144 = 12^2$

x = 12

The percentage of the total number of bottles sold on Monday = 12 + 8 = 20%

The percentage of the total number of bottles sold on Wednesday = 12 – 2 = 10%

20% + 15% + 10% + (y + 15)% + (y + 20)% = 100%

2y = 100 – 80

y = 20/2 = 10

The total number of bottles sold on all days together = 400 * 100/(30 – 20) = 4000

The total number of bottles sold on Monday = 4000 * 20/100 = 800

The total number of bottles sold on Tuesday = 4000 * 15/100 = 600

The total number of bottles sold on Wednesday = 4000 * 10/100 = 400

The total number of bottles sold on Thursday = 4000 * 25/100 = 1000

The total number of bottles sold on Friday = 4000 * 30/100 = 1200

Answer: D

The total number of bottles sold on Tuesday = 600

After decreased,

The total number of bottles sold on Tuesday = 600 * (100 – (12 – 10))/100 = 600 * 98/100 = 588

Required solution = 588 * 25/100 = 147

10. Questions

$x^2 = (432 * 6)/18 = 144 = 12^2$

x = 12

The percentage of the total number of bottles sold on Monday = 12 + 8 = 20%

The percentage of the total number of bottles sold on Wednesday = 12 – 2 = 10%

20% + 15% + 10% + (y + 15)% + (y + 20)% = 100%

2y = 100 – 80

y = 20/2 = 10

The total number of bottles sold on all days together = 400 * 100/(30 – 20) = 4000

The total number of bottles sold on Monday = 4000 * 20/100 = 800

The total number of bottles sold on Tuesday = 4000 * 15/100 = 600

The total number of bottles sold on Wednesday = 4000 * 10/100 = 400

The total number of bottles sold on Thursday = 4000 * 25/100 = 1000

The total number of bottles sold on Friday = 4000 * 30/100 = 1200

Answer: E

The total number of bottles sold on Tuesday and Friday together = (1200+600) = 1800

The number of bottles sold on Monday = 800

Required average = [(1800 – 800)/800]*100 = 125% more

11. Questions

The number of females who ordered food on Uber = 72

The number of males who ordered food on Zomato = 72 * 100/60 = 120

The number of females who ordered food on Zomato = 120/3 * 2= 80

The number of males who ordered food on Swiggy = 80 + 10 = 90

The number of females who ordered food on Swiggy = 120 * 125/100 = 150

The number of males who ordered food on Uber = 150 * 80/100 = 120

App name	The number of males who ordered food	The number of females who ordered food
Zomato	120	80
Swiggy	90	150
Uber	120	72

Answer: B

The total number of people who ordered food on Zomato = 120 + 80 = 200

The total number of people who ordered non-veg food on Zomato = 200 * 65/100 = 130

The number of males who ordered non-veg foodon Zomato = 120 * 4/5 = 96

The number of females who ordered non-veg food on Zomato = 130 – 96 = 34

12. Questions

The number of females who ordered food on Uber = 72

The number of males who ordered food on Zomato = 72 * 100/60 = 120

The number of females who ordered food on Zomato = 120/3 * 2= 80

The number of males who ordered food on Swiggy = 80 + 10 = 90

The number of females who ordered food on Swiggy = 120 * 125/100 = 150

The number of males who ordered food on Uber = 150 * 80/100 = 120

App name	The number of males who ordered food	The number of females who ordered food
Zomato	120	80
Swiggy	90	150
Uber	120	72

Answer: D

The number of females who used coupons on Swiggy= 150 – 90 = 60

The number of males who used coupons on Swiggy= 90 – 54 = 36

The total number of people who used coupons on Swiggy= 60 + 36 = 96

x = 96/240 * 100 = 40

13. Questions

The number of females who ordered food on Uber = 72

The number of males who ordered food on Zomato = 72 * 100/60 = 120

The number of females who ordered food on Zomato = 120/3 * 2= 80

The number of males who ordered food on Swiggy = 80 + 10 = 90

The number of females who ordered food on Swiggy = 120 * 125/100 = 150

The number of males who ordered food on Uber = 150 * 80/100 = 120

App name	The number of males who ordered food	The number of females who ordered food
Zomato	120	80
Swiggy	90	150
Uber	120	72

Answer: B

The number of males who ordered food on Uber = 120

The number of females who ordered food on Zomato = 80

Required percentage = 120:80 =3:2

14. Questions

The number of females who ordered food on Uber = 72

The number of males who ordered food on Zomato = 72 * 100/60 = 120

The number of females who ordered food on Zomato = 120/3 * 2= 80

The number of males who ordered food on Swiggy = 80 + 10 = 90

The number of females who ordered food on Swiggy = 120 * 125/100 = 150

The number of males who ordered food on Uber = 150 * 80/100 = 120

App name	The number of males who ordered food	The number of females who ordered food
Zomato	120	80
Swiggy	90	150
Uber	120	72

Answer: C

The total number of people who ordered food on Uber = 120 + 72 = 192

The total number of people who ordered food on Swiggy = 90+ 150 = 240

Required percentage = (192/240)*100 = 80%

15. Questions

The number of females who ordered food on Uber = 72

The number of males who ordered food on Zomato = 72 * 100/60 = 120

The number of females who ordered food on Zomato = 120/3 * 2= 80

The number of males who ordered food on Swiggy = 80 + 10 = 90

The number of females who ordered food on Swiggy = 120 * 125/100 = 150

The number of males who ordered food on Uber = 150 * 80/100 = 120

App name	The number of males who ordered food	The number of females who ordered food
Zomato	120	80
Swiggy	90	150
Uber	120	72

Answer: C

40% of the total number of males who ordered food on Zomato and Swiggy together = (120 +90) * 40/100 = 210 * 2/5 = 84

16. Questions

Answer: B

According to the question,

Let the sum amount invested by the man be Rs. y.

$CI = P(1+R/100)^n - P$

$(x + 80) * (1 + (20/2)/100)^{(2 * 1)} = 13310$

$(x + 80) * (1 + 10/100)^2 = 13310$

$x + 80 = 13310 * 100/110 * 100/110$

$x = 11000 - 80 = 10920$

$y * (1 + 20/100)^3 - y = 10920$

$y * 1.2 * 1.2 * 1.2 - y = 10920$

$0.728y = 10920$

$y = 15000$

The sum amount invested = Rs. 15000

17. Questions

Answer: A

According to the question,

Let the speed of the stream be x km/hr.

And the upstream speed of the boat = x * 400/100 = 4xkm/hr

The speed of the boat in still water = 4x + x = 5x km/hr

The downstream speed of the boat = 5x + x = 6x km/hr

336/6x + 192/4x = y + 26 - y

56/x + 48/x = 26

104/x = 26

x = 4

The upstream speed of the boat = 4 * 4 = 16 km/hr

18. Questions

Answer: C

According to the question,

Let the present age of B be 5x years.

The present age of C = 6x years

5x + 3 = 6x

x = 3

The present age of B = 5 * 3 = 15 years

The present age of C = 6 * 3 = 18 years

The present age of A = 15 * 2 = 30 years

The present age of D = 18 * 5/2 = 45 years

45 = n30

n = 45/30 = 1.5

19. Questions

Answer: A

According to the question,

Speed = Distance/time

For train A,

x= 320/16

x=20 km/hr

The speed of train B without stoppages = (20+ 30) = 50 km/hr

The speed of train B with stoppages = (20+ 20) = 40 km/hr

Time taken = 200/50+ 200/40 = 4 + 5 = 9 hours

20. Questions

Answer: C

According to the question,

(x * 6) = (x - 20) * 10

6x = 10x - 200

4x = 200

x = 50

(40c + 30m)* 12 = (30c + 10m) * 18

480c + 360m = 540c + 180m

60c = 180m

c/m = 3/1

The ratio of the efficiency of a child to a man = 3:1

21. Questions

Answer: D

According to the question,

(x + 6) * x = 72

$x^2 + 6x – 72 = 0$

$x^2 + 12x - 6x – 72 = 0$

x(x + 12) – 6(x + 12) = 0

x = -12, +6

x = 6

The length of the rectangle = (6 + 6) = 12 cm

The perimeter of the square = 12 * 125/100 = 15 cm

The perimeter of the square after increase = 15 + 1 = 16 cm

4a = 16

a = 4

The side of the square = 4 cm

The area of the square =a^2 = 4* 4 = 16 cm^2

22. Questions

Answer: C

According to the question,

The total quantity of milk and water in the initial mixture = 175 litres

The quantity of milk in the initial mixture = 175 * 4/5 = 140 litres

The quantity of water in the initial mixture = 175 * 1/5 =35 litres

(140 + 25 + x)/(35 + x) = 3/1

(165 + x)/(35 + x) = 3/1

165 + x = 105 + 3x

60 = 2x

x = 30

23. Questions

Answer: D

According to the question,

Let the total marks of the examination be y.

y * (x + 10)/100 – 60 = y * x/100 + 40

(yx + 10y)/100 – 60 = yx/100 + 40

yx + 10y – 6000 = yx + 4000

10y = 10000

y = 1000

Total marks obtained by A = 400

400 = 1000 * x/100

400 = 10x

x = 40

24. Questions

Answer: B

According to the question,

The ratio of the profit share of A, B and C = (280 * 2 + (280 + 120) * 10): (520 * 12): (300 * 10) = 4560: 6240: 3000 = 38: 52: 25

The profit share of C = Rs. 600

The sum of the profit share of A and B = 600 * (38 + 52)/25 = 600 * 90/60 = Rs. 2160

25. Questions

Answer A

According to the questions,

The Cost price of a wheat =Rs.450

The Marked price of a wheat =Rs.500

The selling price = 500*95/100 = Rs.475

Profit%= [(475-450)/450]*100

= 50/9%

Dishonest seller

Profit % = {error/(true value-error)}*100

Profit = 100/(1000-100) *100

= 100/9%

Required Profit percentage = (100/9)-(50/9) = $5\frac{5}{9}\%$

26. Questions

Answer: B

25% of 160 + √169 + 32 = ? * 5

40 + 13 + 32 = ? * 5

? = 85/5

? = 17

27. Questions

Answer: C

115 + 289 - ? = 20% of 700 – 43 + 6

404 - ? = 146 – 43

? = 404 – 103 = 301

28. Questions

Answer: C

40/100 * 230 – (12.5/100 * 104 + 18) =?

92 – (13 + 18) = ?

? = 61

29. Questions

Answer: D

1500 ÷ 30 + ? ÷ 2 = 80 * 12 ÷ 4 + 12

50 + ?/2 = 240 + 12

50 + ?/2 = 252

?/2 = 202

? = 404

30. Questions

Answer: B

? * 3 + 115 – 70 = 91 * √225 ÷ 13

? * 3 + 115 – 70 = 7 * 15

? * 3 = 105 – 45

? = 60/3

? = 20

31. Questions

Answer: D

13^3 – 3 = **2194**

11^3 – 3 = 1328

9^3 – 3 = 726

7^3 – 3 = 340

5^3 – 3 = 122

32. Questions

Answer: A

34 + 13 = 47

47 + 26 = 73

73 + 39 = 112

112 + 52 = **164**

33. Questions

Answer: E

90 * 8 = 720

720/6 = 120

120 * 4 = **480**

480/2 = 240

34. Questions

Answer: C

133 228 353 523 **753**

+95 +125 +170 +230

+30 +45 +60

35. Questions

Answer: B

8 + 8 = 16

16 – 6 = 10

10 + 8 = 18

18 – 6 = **12**

12 + 8 = 20

36. Questions

Answer: C

$4x^2 + 40x + 96 = 0$

$x^2 + 10x + 24 = 0$

$x^2 + 4x + 6x + 24 = 0$

$x(x + 4) + 6(x + 4) = 0$

$(x + 4)(x + 6) = 0$

$x = -4, -6$

$5y^2 + 30y + 25 = 0$

$y^2 + 6y + 5 = 0$

$y^2 + 5y + 1y + 5 = 0$

$y(y + 5) + 1(y + 5) = 0$

$(y + 5)(y + 1) = 0$

$y = -5, -1$

The relationship cannot be determined.

37. Questions

Answer: E

$x^2 - 11x - 102 = 0$

$x^2 - 17x + 6x - 102 = 0$

$x(x - 17) + 6(x - 17) = 0$

$(x - 17)(x + 6) = 0$

$x = +17, -6$

$y^2-36y + 323 = 0$

$y^2-17y - 19y + 323 = 0$

$y(y - 17) - 19(y - 17) = 0$

$(y - 17)(y - 19) = 0$

$y = +17, +19$

Hence, $x \leq y$

38. Questions

Answer: D

$y^2 + 12y + 32 = 0$

$y^2 + 8y + 4y + 32 = 0$

$y(y + 8) + 4(y + 8) = 0$

$(y + 8)(y + 4) = 0$

$y = -8, -4$

$x^2 + 54x + 405 = 0$

$x^2 + 45x + 9x + 405 = 0$

$x(x + 45) + 9(x + 45) = 0$

$(x + 45)(x + 9) = 0$

$x = -45, -9$

Hence, $x < y$

39. Questions

Answer: A

$x^2 - 38x + 165 = 0$

$x^2 - 33x - 5x + 165 = 0$

$x(x - 33) - 5(x - 33) = 0$

$(x - 33)(x - 5) = 0$

$x = +33, +5$

$2y^2 + 39y - 63 = 0$

$2y^2 + 42y - 3y - 63 = 0$

$2y(y + 21) - 3(y + 21) = 0$

$(2y - 3)(y + 21) = 0$

$y = -21, +1.5$

Hence, $x > y$

40. Questions

Answer: B

$2x^2 - 13x + 20 = 0$

$2x^2 - 8x - 5x + 20 = 0$

$2x(x - 4) - 5(x - 4) = 0$

$(2x - 5)(x - 4) = 0$

$x = +2.5, +4$

$4y^2 - 16y + 15 = 0$

$4y^2 - 10y - 6y + 15 = 0$

$2y(2y - 5) - 3(2y - 5) = 0$

$(2y - 3)(2y - 5) = 0$

$y = +1.5, +2.5$

Hence, $x \geq y$