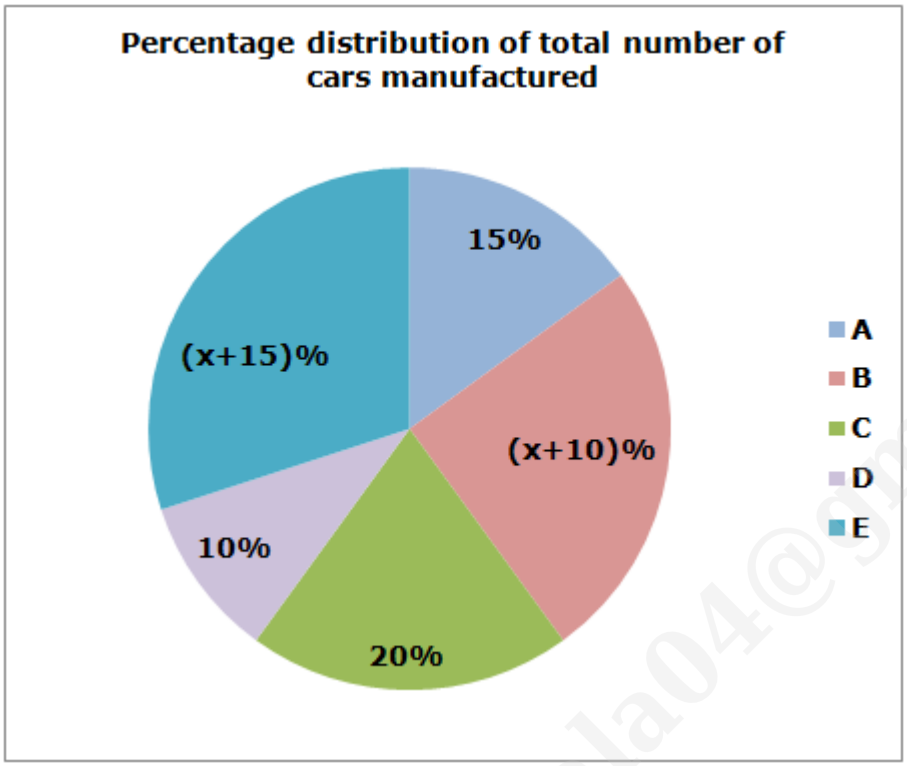
1. Questions

Study the following information carefully and answer the questions.

The given pie chart shows the percentage distribution of total number of cars (alto + audi) manufactured in five different companies namely A, B, C, D and E respectively. The total number of cars manufactured in company A is 900.



The given table shows the ratio of the number of Alto cars to Audi cars manufactured in five different companies namely A, B, C, D and E respectively.

Company	Ratio of number of Alto cars to Audi cars manufactured
A	x/5 : 6
B	x:5
C	7:5
D	8:7
E	x/3 : 4

The total number of cars manufactured in company F is (x-5)% less than that of company C and the ratio of the number of Alto cars manufactured in company E to F is (5: x/5) respectively. Find the number of audi cars manufactured in company F.

a. 520

b. 480

c. 550

d. 500

e. 380

2. Questions

In company C, out of the total number of cars manufactured, some cars are sold and some cars are unsold. The ratio of the number of Alto to audi cars sold is 15:13 respectively and the ratio of the number of Alto to audi cars unsold is 5:3 respectively. Find the total number of cars unsold.

a. 640

b. 750

c. 540

d. 560

e. 600

3. Questions

The number of Benz car manufactured in company D is (x+10)% more than the number of Alto cars manufactured in company A. The ratio of the number of Benz cars manufactured in company D to A is x:y respectively. If number of Benz car manufactured in company A is 25 more than that of D, then find the value of y.

a. 15

b. 18

c. 16

d. 19

e. 11

4. Questions

Find the difference between the numbers of alto cars manufactured in company E and the number of audi cars manufactured in company A.

a. 250

b. 400

c. 350

d. 420

e. 200

5. Questions

Find the ratio between the total number of cars manufactured in company B to the number of Audi cars manufactured in company C.

a. 1:3

b. 2:5

c. 7:5

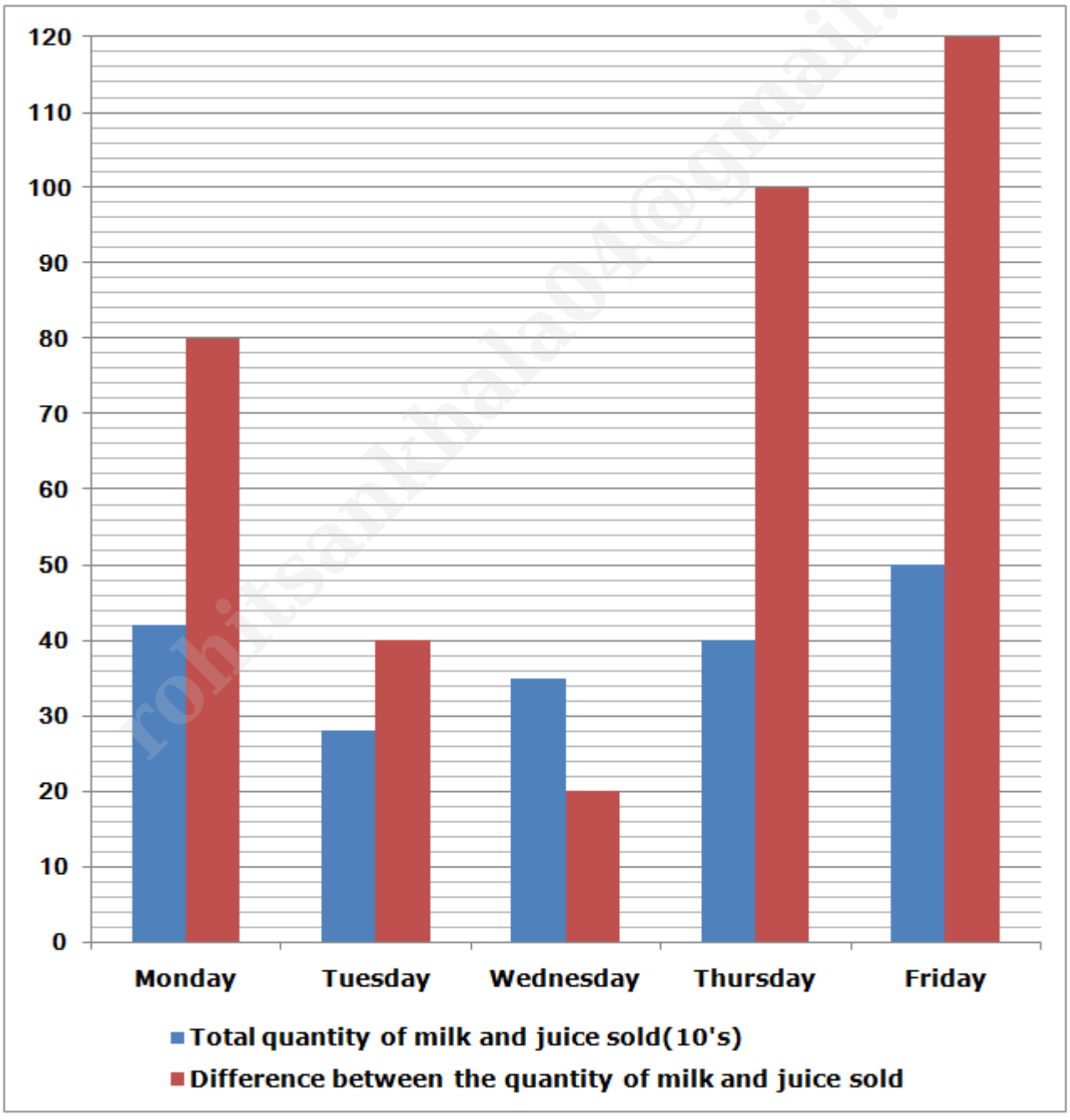
d. 3:1

e. 1:1

6. Questions

Study the following information carefully and answer the questions.

The given bar graph shows the total quantity of milk and juice sold in tens and the difference between the quantity of milk and juice sold on five different days namely Monday, Tuesday, Wednesday, Thursday and Friday respectively.



Note: The quantity of milk sold is more than the quantity of juice sold.

The quantity of milk sold on Saturday is (y/10)% more than that on Monday, and the quantity of juice sold on Saturday is 0.5y% less than that on Tuesday. The total quantity of juice sold on Saturday and Friday is 286. Find the total quantity of juice and milk sold on Saturday.

a. 350

b. 356

c. 260

d. 267

e. 190

7. Questions

On Thursday, 20% of the milk is mixed with 40% of the juice, and then the mixture [milk + juice] is sold for Rs. 80 per litre. Find the revenue generated from selling the mixture [milk + juice].

a. Rs. 7200

b. Rs. 8800

c. Rs. 5400

d. Rs. 4780

e. Rs. 8000

8. Questions

On Tuesday, 35% of the milk sold is used for making ice-cream, 25% of the milk is used for making shakes and the remaining milk is used for making curd. Find the difference between the quantity of milk used for making shakes and curd together and ice-cream.

a. 55

b. 48

c. 52

d. 60

e. 65

9. Questions

The total quantity of juice sold on Tuesday is what percentage of the quantity of juice sold on Thursday.

a. 60%

b. 80%

c. 56%

d. 44%

e. 67%

10. Questions

Find the difference between the total quantity of milk sold on Wednesday, Thursday and Friday together and the quantity of juice sold on Monday, Wednesday and Friday.

a. 255

b. 220

c. 345

d. 180

e. 188

11. Questions

Study the following information carefully and answer the questions.

Navin invested Rs. (x+5000) in scheme A offering simple interest at a rate of 20% per annum for 2 years and he received Rs. 4800 as interest. He then invested Rs.200 more than the interest received from scheme A in scheme B at a compound interest rate of 10% per annum for 2 years. After that, Sam and Navin started a business together. Sam invested thrice the amount of interest received by Navin in scheme B, while Navin invested Rs. 0.5x. Sam and Navin invested for 8 months and 12 months respectively. The total amount of annual profit of the business is Rs. 6400.

If Rs. 2(x-2000) is invested in compound interest at a rate of 12% per annum for 2 years, then find the interest received.

a. Rs. 2500

b. Rs. 2544

c. Rs. 3200

d. Rs. 3450

e. Rs. 2879

12. Questions

If Navin invested the interest received in scheme A for 8 months, and Sam invested Rs. x in the business for 9 months, and the total profit share is Rs. 3380. Find the profit share of Navin.

a. Rs. 1280

b. Rs. 2100

c. Rs. 2800

d. Rs. 1560

e. Rs. 2900

13. Questions

Find the difference between the profit share of Navin and Sam.

a. Rs. 1500

b. Rs. 1600

c. Rs. 1400

d. Rs. 900

e. Rs. 1780

14. Questions

Find the interest received by Navin in both scheme A and B together.

a. Rs. 5850

b. Rs. 6200

c. Rs. 5400

d. Rs. 5000

e. Rs. 7200

15. Questions

If Rs. x is invested in SI at a rate of 20% per annum and Rs. 2x is invested in compound interest at a rate of 10% per annum, then find the total amount of interest received from both schemes after 2 years.

a. Rs. 5740

b. Rs. 6780

c. Rs. 4456

d. Rs. 5900

e. Rs. 6200

16. Questions

A and B together can complete a piece of work in 60 days, while A, B and C together can complete the same work in 36 days. If A, B and C together started the work, but after 14 days, A and B left the work, and after 5 more days, A joins with C, and then A and C together can complete the remaining work in 25 days. In how many days B alone complete the whole work?

a. 120 days

b. 180 days

c. 200 days

d. 150 days

e. 270 days

17. Questions

If the present age of A and B are added to twice the present age of C, then the total age becomes 59 years. The present age of C is 3 years less than that of B, and the present age of A and B together is 35 years. Find the present age of C.

a. 11 years

b. 15 years

c. 12 years

d. 19 years

e. 22 years

18. Questions

Bag A contains (x+5) white, x green and (x+4) violet balls, and the probability of getting a violet ball from the bag is 3/8. Another bag B contains (x +3) white and (x+2) green balls. Find the probability of drawing two different balls of different colours from bag B.

a. 8/9

b. 7/15

c. 8/15

d. 11/15

e. 12/7

19. Questions

A gas stove, marked 25% above its cost price, is sold after a discount of Rs. 375, while the fan is sold for a price that is Rs. 100 less than the selling price of gas stove. The fan is marked 20% above its cost price and is sold after a discount of Rs. 400. If the cost price of gas stove and fan is same, then find the cost price of the gas stove.

a. Rs. 2100

b. Rs. 1500

c. Rs. 1800

d. Rs. 2500

e. Rs. 3200

20. Questions

A, B and C started a business in such a way that A invested 400 more than B and Rs. 200 less than C. A and B invested for 8 months. After a year, the ratio of the profit shares of A and B is 5:3 respectively. Find the initial investment of C.

a. Rs. 1100
b. Rs. 1450
c. Rs. 1200
d. Rs. 2100
e. Rs. 1400

21. Questions

Som deposited a certain sum of money in scheme A offering simple interest at a rate of 10% p.a and the rest amount in scheme B offering simple interest at the rate of 5% p.a. The total interest received by him at the end of 3 years is Rs. 2550. If the total amount invested by him is Rs. 11000, then find the amount invested by him in scheme A.

a. Rs. 7000
b. Rs. 5000
c. Rs. 6000
d. Rs. 4500
e. Rs. 6400

22. Questions

The ratio of the number of boys to girls in school is 8:7 respectively, and the number of boys in college is 25% more than that in school, while the number of girls in college is 450. If the total number of students in school and college together is 1000, then find the ratio between the total number of school students and college students.

a. 33:67
b. 67:69
c. 33:38
d. 23:33
e. 67:71

23. Questions

A man rows a boat 64 km downstream and 24 km upstream in 7 hours. He found he could row 24 km with the stream in the same time as he can row 12 km against the stream. Find the speed of the boat.

a. 12 km/hr

b. 4 km/hr

c. 11 km/hr

d. 14 km/hr

e. 8 km/hr

24. Questions

A mixture of 960 litres contains juice and water in the ratio of 7:5 respectively. If 120 litres of the mixture is replaced with 60 litres of juice and 50 litres of water, then the final ratio of juice and water becomes 11:x respectively . Find the value of x.

a. 5

b. 8

c. 7

d. 4

e. 3

25. Questions

A two-digit number divisible by 8, when its digits are reversed, increased by 36. Also, when 12 is added to the original number and then divided by 3, the resultant value is Z. Find the value of 2Z.

a. 40

b. 20

c. 45

d. 25

e. 31

26. Questions

Find out the wrong number in the following number series.

7.5, 7.5, 22.5, 112.5, 788.5, 7087.5

a. 7087.5

b. 112.5

c. 22.5

d. 7.5

e. 788.5

27. Questions

31.5, 126, 42, 168, 58, 224

a. 31.5

b. 58

c. 126

d. 224

e. 168

28. Questions

42, 73, 128, 234, 420, 727

a. 234

b. 73

c. 727

d. 128

e. 420

29. Questions

47, 282, 94, 564, 188, 1124

a. 564

b. 188

c. 1124

d. 94

e. 282

30. Questions

8, 15, 32, 59, 96, 145

a. 8

b. 15

c. 32

d. 59

e. 145

31. Questions

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

678.992 + 236.012 – 472.986 = ? – 167.988

a. 615

b. 610

c. 606

d. 618

e. 620

32. Questions

478.12 + 150.25 * 20 – 369.43 = ? + 2500.21

a. 656

b. 725

c. 609

d. 619

e. 624

33. Questions

(968.005 + 231.983 * 5) ÷ 75.999 = ? ÷ 4

a. 106

b. 103

c. 115

d. 112

e. 109

34. Questions

22.955^2 + 176.023 + 68.975 = $?^2$ – 66.989

a. 29

b. 21

c. 23

d. 25

e. 27

35. Questions

$(675.988)^{1/2}$ * $(441)^{1/2}$ + 399.986 = ? + 257.987 ÷ 3

a. 851

b. 857

c. 853

d. 855

e. 860

36. Questions

The following question contains two equations as I and II. You have to solve both the equations and give the answer.

I). $x * (x + 8) + 106 = 190$

II). $y^2 + 31y + 240 = 0$

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). $x^2 - 4x - 32 = 0$

II). $y^2 + 10y + 24 = 0$

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). $x^2 - 31x + 220 = 0$

II). $y^2 = 100$

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). $x^2 - 8x - 65 = 0$

II). $y^2 + 11y + 28 = 0$

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). $x^2 + 3x - 54 = 0$

II). $y^2 - 16y + 60 = 0$

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

$15 + x + 10 + 20 + 10 + x + 15 = 100$

$2x = 100 - 70$

$x = 15$

The total number of cars manufactured in company A = 900

The total number of companies manufactured in all companies = 900 * 100/15 = 6000

The number of Alto cars manufactured in company A = 900 * 3/9 = 300

The number of Audi car manufactured in company A = 900 * 6/9 = 600

Similarly,

Company	The total number of cars manufactured	The number of alto cars manufactured	The number of audi cars manufactured
A	900	300	600
B	1500	1125	375
C	1200	700	500
D	600	320	280
E	1800	1000	800

Answer: B

The total number of cars manufactured in company F = 1200 * 90/100 = 1080

The number of Alto cars manufactured in company F = 1000 * 3/5 = 600

The number of Audi cars manufactured in company F = 1080 – 600 = 480

2. Questions

15 + x + 10 + 20 + 10 + x + 15 = 100

2x = 100 – 70

x = 15

The total number of cars manufactured in company A = 900

The total number of companies manufactured in all companies = 900 * 100/15 = 6000

The number of Alto cars manufactured in company A = 900 * 3/9 = 300

The number of Audi car manufactured in company A = 900 * 6/9 = 600

Similarly,

Company	The total number of cars manufactured	The number of alto cars manufactured	The number of audi cars manufactured
A	900	300	600
B	1500	1125	375
C	1200	700	500
D	600	320	280
E	1800	1000	800

Answer: A

According to the question,

The number of Alto cars manufactured in company C = 700

The number of Audi cars manufactured in company C = 500

15x + 5y = 700 ------->(1)

13x + 3y = 500 --------> (2)

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

x = 20, y = 80

The total number of cars unsold in company C = 8 * 80 = 640

3. Questions

15 + x + 10 + 20 + 10 + x + 15 = 100

2x = 100 – 70

x = 15

The total number of cars manufactured in company A = 900

The total number of companies manufactured in all companies = 900 * 100/15 = 6000

The number of Alto cars manufactured in company A = 900 * 3/9 = 300

The number of Audi car manufactured in company A = 900 * 6/9 = 600

Similarly,

Company	The total number of cars manufactured	The number of alto cars manufactured	The number of audi cars manufactured
A	900	300	600
B	1500	1125	375
C	1200	700	500
D	600	320	280
E	1800	1000	800

Answer: C

The number of Benz cars manufactured in company D = 300 * 125/100 = 375

The number of Benz cars manufactured in company A = 375 + 25 = 400

= 375: 400 = 15:16

y = 16

4. Questions

15 + x + 10 + 20 + 10 + x + 15 = 100

2x = 100 – 70

x = 15

The total number of cars manufactured in company A = 900

The total number of companies manufactured in all companies = 900 * 100/15 = 6000

The number of Alto cars manufactured in company A = 900 * 3/9 = 300

The number of Audi car manufactured in company A = 900 * 6/9 = 600

Similarly,

Company	The total number of cars manufactured	The number of alto cars manufactured	The number of audi cars manufactured
A	900	300	600
B	1500	1125	375
C	1200	700	500
D	600	320	280
E	1800	1000	800

Answer: B

The number of alto cars manufactured in company E = 1000

The number of audi cars manufactured in company A = 600

Required difference = (1000 – 600) = 400

5. Questions

15 + x + 10 + 20 + 10 + x + 15 = 100

2x = 100 – 70

x = 15

The total number of cars manufactured in company A = 900

The total number of companies manufactured in all companies = 900 * 100/15 = 6000

The number of Alto cars manufactured in company A = 900 * 3/9 = 300

The number of Audi car manufactured in company A = 900 * 6/9 = 600

Similarly,

Company	The total number of cars manufactured	The number of alto cars manufactured	The number of audi cars manufactured
A	900	300	600
B	1500	1125	375
C	1200	700	500
D	600	320	280
E	1800	1000	800

Answer: D

The total number of cars manufactured in company B = 1500

The number of Audi cars manufactured in company C = 500

Required ratio = 1500 : 500 = 3:1

6. Questions

The total quantity of milk and juice sold on Monday = 420

Milk + juice = 420 --------->(1)

Milk – juice = 80 ------> (2)

The quantity of milk sold on Monday = 250

The quantity of juice sold on Monday = 170

Similarly,

Days	The total quantity of milk and juice sold	The quantity of milk sold	The quantity of juice sold
Monday	420	250	170
Tuesday	280	160	120
Wednesday	350	185	165
Thursday	400	250	150
Friday	500	310	190

Answer: B

The quantity of juice sold on Saturday = (286 – 190) = 96

120 * (100 – 0.5y)/100 = 96

(100 – 0.5y) = 80

0.5y = 20

y = 40

The quantity of milk sold on Saturday = (250 * 104/100) = 260

Required sum = (260 + 96) = 356

7. Questions

The total quantity of milk and juice sold on Monday = 420

Milk + juice = 420 --------->(1)

Milk – juice = 80 ------> (2)

The quantity of milk sold on Monday = 250

The quantity of juice sold on Monday = 170

Similarly,

Days	The total quantity of milk and juice sold	The quantity of milk sold	The quantity of juice sold
Monday	420	250	170
Tuesday	280	160	120
Wednesday	350	185	165
Thursday	400	250	150
Friday	500	310	190

Answer: B

The quantity of milk sold on Thursday = 250

The quantity of 25% of the milk on Thursday = 250 * 20/100 = 50

The quantity of 40% of the juice on Thursday = 150 * 40/100 = 60

Revenue generated = 110 * 80 = Rs. 8800

8. Questions

The total quantity of milk and juice sold on Monday = 420

Milk + juice = 420 --------->(1)

Milk – juice = 80 ------> (2)

The quantity of milk sold on Monday = 250

The quantity of juice sold on Monday = 170

Similarly,

Days	The total quantity of milk and juice sold	The quantity of milk sold	The quantity of juice sold
Monday	420	250	170
Tuesday	280	160	120
Wednesday	350	185	165
Thursday	400	250	150
Friday	500	310	190

Answer: B

The quantity of milk sold on Tuesday = 160

The quantity of milk used for making ice-cream on Tuesday = 160 * 35/100 = 56

The quantity of milk used for making shakes on Tuesday = 160 * 25/100 = 40

The quantity of milk used for making curd on Tuesday = 160 – 96 = 64

Required difference = (104 – 56) = 48

9. Questions

The total quantity of milk and juice sold on Monday = 420

Milk + juice = 420 --------->(1)

Milk – juice = 80 ------> (2)

The quantity of milk sold on Monday = 250

The quantity of juice sold on Monday = 170

Similarly,

Days	The total quantity of milk and juice sold	The quantity of milk sold	The quantity of juice sold
Monday	420	250	170
Tuesday	280	160	120
Wednesday	350	185	165
Thursday	400	250	150
Friday	500	310	190

Answer: B

The quantity of juice sold on Tuesday = 120

The quantity of juice sold on Thursday = 150

Required percentage = (120/150) * 100 = 80%

10. Questions

The total quantity of milk and juice sold on Monday = 420

Milk + juice = 420 --------->(1)

Milk – juice = 80 ------> (2)

The quantity of milk sold on Monday = 250

The quantity of juice sold on Monday = 170

Similarly,

Days	The total quantity of milk and juice sold	The quantity of milk sold	The quantity of juice sold
Monday	420	250	170
Tuesday	280	160	120
Wednesday	350	185	165
Thursday	400	250	150
Friday	500	310	190

Answer: B

The total quantity of milk sold on Wednesday, Thursday and Friday = (250 + 310 + 185) = 745

The quantity of juice sold on Monday, Wednesday and Friday = 170 + 165 + 190 = 525

Difference = 745 – 525 = 220

11. Questions

For scheme A

SI = PNR/100

4800 = (x+5000) * 20 * 2/100

12000 = x + 5000

x = 7000

For scheme B,

The amount invested in scheme B = 4800 + 200 = Rs. 5000

$CI = P(1+R/100)^n – P$

CI = 5000 * 1.1 * 1.1 – 5000

CI = 1050

The ratio of profit share of Sam to Navin = (3150 * 8) : (0.5 * 7000 * 12)

= 420: 700

= 3:5

The profit share of Navin = 6400 * 5/8 =Rs. 4000

The profit share of Sam = 6400 * 3/8 = 2400

Answer: B

The value of x = 7000

$CI = P(1+R/100)^n – P$

CI = 10000 * 1.12 * 1.12 – 10000

CI = 2544

12. Questions

For scheme A

SI = PNR/100

4800 = (x+5000) * 20 * 2/100

12000 = x + 5000

x = 7000

For scheme B,

The amount invested in scheme B = 4800 + 200 = Rs. 5000

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

CI = 5000 * 1.1 * 1.1 – 5000

CI = 1050

The ratio of profit share of Sam to Navin = (3150 * 8) : (0.5 * 7000 * 12)

= 420: 700

= 3:5

The profit share of Navin = 6400 * 5/8 =Rs. 4000

The profit share of Sam = 6400 * 3/8 = 2400

Answer: A

The profit share of Navin to Sam = (4800 * 8) : (7000 * 9)

= 64: 105

The profit share of Navin = 3380 * 64/169 = Rs. 1280

13. Questions

For scheme A

SI = PNR/100

4800 = (x+5000) * 20 * 2/100

12000 = x + 5000

x = 7000

For scheme B,

The amount invested in scheme B = 4800 + 200 = Rs. 5000

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

CI = 5000 * 1.1 * 1.1 – 5000

CI = 1050

The ratio of profit share of Sam to Navin = (3150 * 8) : (0.5 * 7000 * 12)

= 420: 700

= 3:5

The profit share of Navin = 6400 * 5/8 =Rs. 4000

The profit share of Sam = 6400 * 3/8 = 2400

Answer: B

The profit share of Navin = 6400 * 5/8 =Rs. 4000

The profit share of Sam = 6400 * 3/8 = 2400

Required difference = (4000 -2400) = Rs. 1600

14. Questions

For scheme A

SI = PNR/100

4800 = (x+5000) * 20 * 2/100

12000 = x + 5000

x = 7000

For scheme B,

The amount invested in scheme B = 4800 + 200 = Rs. 5000

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

CI = 5000 * 1.1 * 1.1 – 5000

CI = 1050

The ratio of profit share of Sam to Navin = (3150 * 8) : (0.5 * 7000 * 12)

= 420: 700

= 3:5

The profit share of Navin = 6400 * 5/8 =Rs. 4000

The profit share of Sam = 6400 * 3/8 = 2400

Answer: A

The total interest received by Navin in scheme A and B = (4800+1050) = Rs. 5850

15. Questions

For scheme A

SI = PNR/100

4800 = (x+5000) * 20 * 2/100

12000 = x + 5000

x = 7000

For scheme B,

The amount invested in scheme B = 4800 + 200 = Rs. 5000

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

CI = 5000 * 1.1 * 1.1 – 5000

CI = 1050

The ratio of profit share of Sam to Navin = (3150 * 8) : (0.5 * 7000 * 12)

= 420: 700

= 3:5

The profit share of Navin = 6400 * 5/8 =Rs. 4000

The profit share of Sam = 6400 * 3/8 = 2400

Answer: A

The value of x = 7000

The interest received,

= (7000 * 20/100 * 2) + (14000*1.1*1.1 – 14000)

= (2800 + 2940)

= 5740

16. Questions

Answer: B

According to the question,

Let, the total work = 180 units

The efficiency of A and B together = 180/60 = 3 units

The efficiency of A, B and C together = 180/36 = 5 units

The efficiency of C = 5 – 3 = 2 units

(5 * 14 + 5 * 2 + (A+C)*25) = 180

(A+C)* 25 = 180 – 80

A + C = 100/25

A + C = 4

So, the efficiency of A = 2 units

And, the efficiency of B = 3 -2 = 1 unit

B alone complete the whole work = 180/1 = 180 days

17. Questions

Answer: C

According to the question,

A + B + 2C = 59

C = B – 3

A + B + 2B – 6 = 59

A + 3B = 65 ------->(1)

A + B = 35 -------> (2)

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

The present age of A = 20 years

The present age of B = 15 years

The present age of C

20 + 15 + 2C = 59

2C = 24

The present age of C = 12 years

18. Questions

Answer: C

According to the question,

The total number of balls in the bag A = (x+5+x+x+4) = (3x +9)

(x + 4)/(3x + 9) = 3/8

8x + 32 = 9x + 27

x = 5

The number of white balls in the bag B = 5 + 3 = 8

The number of green balls in the bag B = 5 + 2 = 7

(8 * 7)/(15 * 7) = 8/15

19. Questions

Answer: B

According to the question,

Let, the cost price of the gas stove = CP of fan = Rs. x

(x * 1.25 – 375) = (x * 1.2 – 400) + 100

1.25x – 375 = 1.2x – 300

0.05x = 75

x = 1500

The cost price of the gas stove = Rs. 1500

20. Questions

Answer: C

According to the question,

Let, the initial investment of B = Rs. y

The ratio of profit share of A, B and C = (y + 400)* 8: (y * 8): (y+600) * 12

= (2y +800): (2y): (3y+1800)

(2y+800)/2y = 5/3

6y + 2400 = 10y

4y = 2400

y= 600

The initial investment of C = 600 + 600 = Rs. 1200

21. Questions

Answer: C

According to the question,

The total amount deposited by Som = Rs. 11000

The amount deposited by Som in scheme A = Rs. x

The mount deposited by Som in scheme B = Rs. (11000 – x)

(x * 3* 10/100) + (11000-x)*3 * 5/100 = 2550

0.3x + 1650 – 0.15x = 2550

0.15x = 900

x = 6000

The Amount invested in scheme A = Rs. 6000

22. Questions

Answer: A

According to the question

Let, the number of boys and girls in school is 8x and 7x respectively.

The number of boys in the college = 8x * 125/100 = 10x

The number of girls in the college = 450

8x + 7x + 10x + 450 = 1000

25x = 550

x = 22

The total number of school students = 15 * 22 = 330

The total number of college students = 1000 – 330 = 670

Required ratio = 33: 67

23. Questions

Answer: A

According to the question,

Let, the speed of the boat = x km/hr

The speed of the stream = y km/hr

24/(x+y) = 12/(x –y)

24x – 24y = 12x + 12y

x = 3y

64/(x+y) + 24/(x –y) = 7

64/4y + 24/2y = 7

28/y = 7

y = 4

x = 3* 4 = 12

The speed of the boat = 12 km/hr

24. Questions

Answer: B

According to the question,

The total quantity of the mixture of juice and water = 960 litres

The initial quantity of juice in the mixture = 960 * 7/12 = 560 litres

The initial quantity of water in the mixture = 960 * 5/12 = 400 litres

((560 – 70 + 60)/(400 – 50 + 50) = 11/x

550/400 = 11/x

11/8 = 11/x

x = 8

25. Questions

Answer: A

According to the question,

Let, the tens and unit digit of two digit number be x and y respectively

The two digit number = 10x + y

The number obtained when digits are reversed = (10y +x)

$(10y + x) - (10x + y) = 36$

$9(y - x) = 36$

$y - x = 4$

The possible values of the number = 15, 26, 37, 48 and 59

The value which is divisible by 8 is 48

The number is 48.

$Z = (48+12)/3 = 20$

$2Z = 40$

26. Questions

Answer: E

$7.5 * 1 = 7.5$

$7.5 * 3 = 22.5$

$22.5 * 5 = 112.5$

$112.5 * 7 =$ **787.5**

$787.5 * 9 = 7087.5$

27. Questions

Answer: B

$31.5 * 4 = 126$

$126 \div 3 = 42$

$42 * 4 = 168$

$168 \div 3 =$ **56**

$56 * 4 = 224$

28. Questions

Answer: D

42 73 **129** 234 420 727

31 56 105 186 307

25 49 81 121

5^2 7^2 9^2 11^2

29. Questions

Answer: C

$47 * 6 = 282$

282 ÷ 3 = 94

94 * 6 = 564

564 ÷ 3 = 188

188 * 6 = **1128**

30. Questions

Answer: E

8 + 7 = 15

15 + 17 = 32

32 + 27= 59

59 + 37= 96

96 + 47= **143**

31. Questions

Answer: B

678.992 + 236.012 – 472.986 = ? – 167.988

679 + 236 – 473 = ? – 168

442 + 168 = ?

610 = ?

32. Questions

Answer: C

478.12 + 150.25 * 20 – 369.43 = ? + 2500.21

478 + 150 * 20 - 369 = ? + 2500

478 + 3000 - 369 = ? + 2500

3109 – 2500 = ?

609 = ?

33. Questions

Answer: D

(968.005 + 231.983 * 5) ÷ 75.999 = ? ÷ 4

(968 + 232 * 5) ÷ 76 = ? ÷ 4

(968 + 1160) ÷ 76 = ? ÷ 4

2128 ÷ 76 = ? ÷ 4

28 = ? ÷ 4

$28 * 4 = ?$

$112 = ?$

34. Questions

Answer: A

$22.955^2 + 176.023 + 68.975 = ?^2 - 66.989$

$23^2 + 176 + 69 = ?^2 - 67$

$529 + 176 + 69 = ?^2 - 67$

$774 = ?^2 - 67$

$774 + 67 = ?^2$

$841 = ?^2$

$29 = ?$

35. Questions

Answer: E

$(675.988)^{1/2} * (441)^{1/2} + 399.986 = ? + 257.987 \div 3$

$(676)^{1/2} * (441)^{1/2} + 400 = ? + 258 \div 3$

$26 * 21 + 400 = ? + 86$

$546 + 400 = ? + 86$

$946 - 86 = ?$

$860 = ?$

36. Questions

Answer: A

$x * (x + 8) + 106 = 190$

$x^2 + 8x + 106 - 190 = 0$

$x^2 + 8x - 84 = 0$

$x^2 + 14x - 6x - 84 = 0$

$x(x + 14) - 6(x + 14) = 0$

$x = 6, -14$

$y^2 + 31y + 240 = 0$

$y^2 + 16y + 15y + 240 = 0$

$y(y + 16) + 15(y + 16) = 0$

$y = -16, -15$

x > y

37. Questions

Answer: B

$x^2 – 4x – 32 = 0$

$x^2 – 8x + 4x – 32 = 0$

$x(x – 8) + 4(x – 8) = 0$

$x = 8, -4$

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

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

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

$y = -6, -4$

x ≥ y

38. Questions

Answer: A

$x^2 – 31x + 220 = 0$

$x^2 – 20x – 11x + 220 = 0$

$x(x – 20) – 11(x – 20) = 0$

$x = 11, 20$

$y^2 = 100$

$y = 10, -10$

x > y

39. Questions

Answer: C

$x^2 – 8x – 65 = 0$

$x^2 – 13x + 5x – 65 = 0$

$x(x – 13) + 5(x – 13) = 0$

$x = +13, -5$

$y^2 + 11y + 28 = 0$

$y^2 + 7y + 4y + 28 = 0$

$y(y + 7) + 4(y + 7) = 0$

$y = -7, -4$

The relationship can't be determined

40. Questions

Answer: E

$x^2 + 3x - 54 = 0$

$x^2 + 9x - 6x - 54 = 0$

$x(x + 9) - 6(x + 9) = 0$

$x = -9, +6$

$y^2 - 16y + 60 = 0$

$y^2 - 10y - 6y + 60 = 0$

$y(y - 10) - 6(y - 10) = 0$

$y = +10, +6$

Hence, $x \leq y$