1. Questions

Study the following information carefully and answer the questions.

The given table shows the percentage distribution of the total number of cycles manufactured (Gear + folding) and the ratio of the number of Gear cycle to folding cycle manufactured in five different companies namely A, B, C, D and E respectively.

Company	Percentage distribution of total number of cycle manufactured	Ratio of number of gear cycle to folding cycle
A	18%	11:7
B	22%	5:6
C	5%	9:6
D	25%	6:19
E	30%	22:23

Note: The difference between the total number of cycles manufactured in company E and A is 360.

The total number of cycles manufactured by company F is (x + 10)% more than that of company A. The ratio of the number of gear cycles manufactured in company F to that in company C is 3:1, and the number of folding cycles manufactured in company F is 9 less than that of company B. Find the value of x.

a. 8

b. 5

c. 12

d. 10

e. 6

2. Questions

In company C, there are two brands of cycles manufactured, namely P and Q. The ratio of brand P and Q with Gear to folding cycles manufactured is 5:2 and 1:1, respectively. Find the number of brand Q Gear cycles manufactured.

a. 20

b. 40

c. 50

d. 10

e. 30

3. Questions

In company B, 35% of the total cycles manufactured are sold, and the rest are unsold. The ratio of unsold gear cycles to unsold folding cycles is 6:7 respectively. Find the difference between the number of gear cycles sold and the number of folding cycles sold.

a. 41
b. 27
c. 43
d. 54
e. 52

4. Questions

The total number of cycles manufactured in company E is what percentage more or less than the number of gear cycles manufactured in company B.

a. 180%
b. 320%
c. 200%
d. 250%
e. 100%

5. Questions

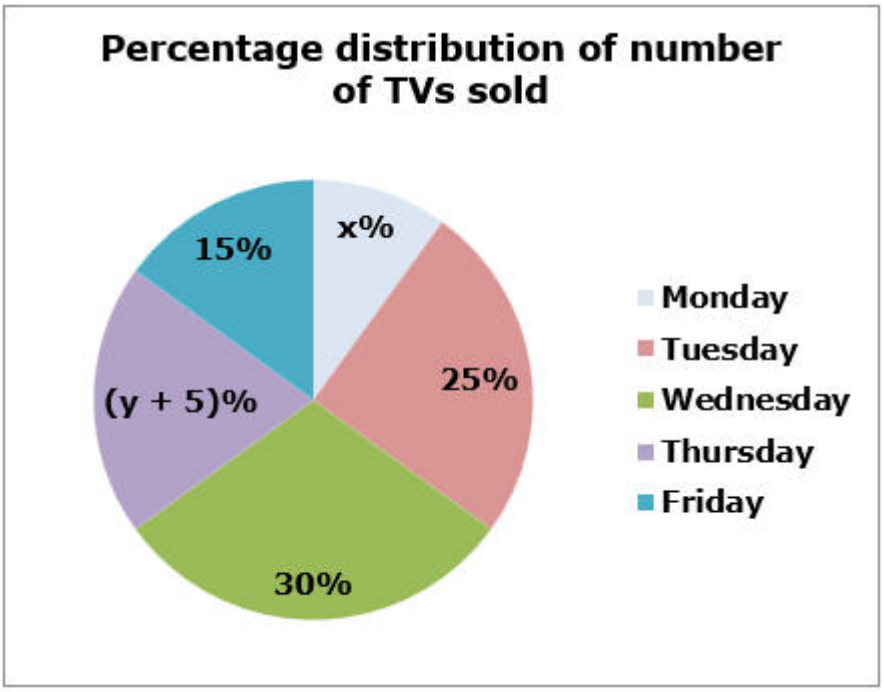
Find the average number of folding cycles sold in all companies together.

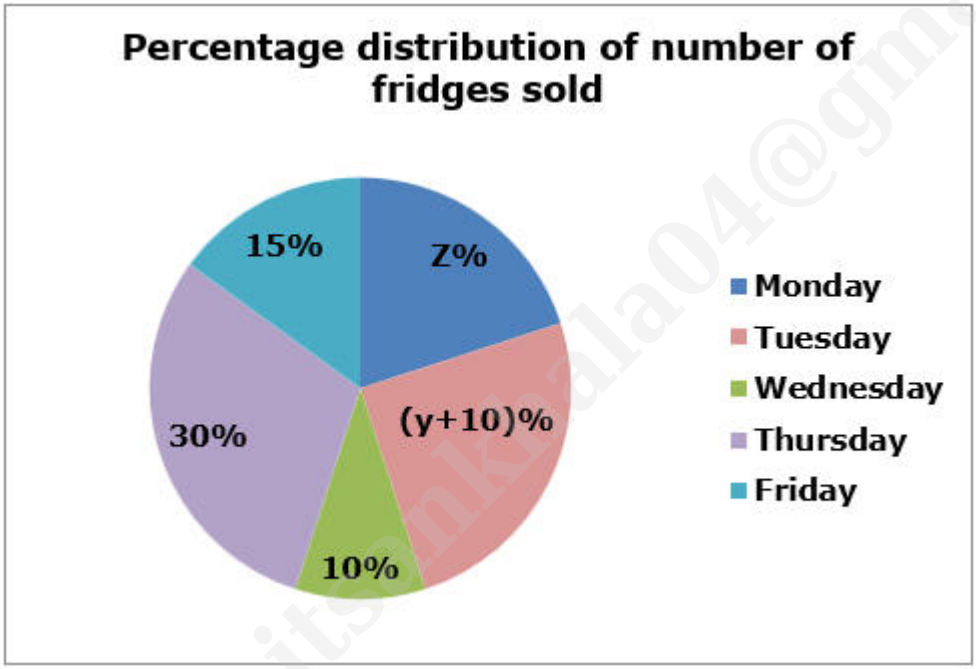
a. 335
b. 332
c. 432
d. 298
e. 345

6. Questions

Study the following information carefully and answer the questions.

The given pie chart shows the percentage distribution of number of TVs sold and the percentage distribution of number of fridges sold on five different days namely Monday, Tuesday, Wednesday, Thursday and Friday respectively.





Note:

i). The number of TVs and fridges sold in all days together is 3000 and 3600 respectively.

ii). $x^2 + 5x - 150 = 0$ (x is a positive integer)

The number of fans sold on Tuesday is (z-5)% less than the number of fridges sold on Monday. The number of fans sold on Wednesday is 53 more than that on Tuesday. Find out the number of fans sold on Wednesday.

a. 687

b. 665

c. 724

d. 615

e. 715

7. Questions

The ratio of males to females who bought TV on Wednesday is x:y respectively. The number of females who bought TV on Friday was z% less than that on Wednesday. Find the number of males who bought TV on Friday.

a. 18

b. 28

c. 25

d. 38

e. 10

8. Questions

On Monday, two brands of TV and fridges sold LG and Samsung. The number of LG TVs sold is the same as the number of LG fridges sold, and the ratio of Samsung TVs to Samsung fridges sold is 3:10 respectively. Find the number of LG TVs sold.

a. 120

b. 180

c. 240

d. 600

e. 450

9. Questions

Find the difference between the number of TVs sold on Tuesday and the number of fridges sold on Friday.

a. 210

b. 240

c. 420

d. 310

e. 290

10. Questions

Find the ratio between the numbers of TVs sold on Thursday to the number of fridges sold on Wednesday.

a. 3:5

b. 2:7

c. 5:4

d. 5:3

e. 1:8

11. Questions

Study the following information carefully and answer the questions.

A, B and C started a business, A and C invested in the ratio 5:4 respectively and B invested Rs. y. After 4 months A increased his investment by Rs. 400 and after another 2 months B increased his investment by Rs. 500 and C withdraw Rs. 200. The ratio of the annual profit share of A to C is 38:21 respectively and the profit share of B to C is 2:1 respectively. The total annual profit share is Rs. 101000.

If Rs. 6y is invested in a compound interest at a rate of (x/10)% per annum for 2 years, then find the interest received.

a. Rs. 3190

b. Rs. 3036

c. Rs. 2490

d. Rs. 3136

e. Rs. 2915

12. Questions

If the value of x is decreased by 60% and the value of y is increased by Rs. 50, then find the ratio of the profit share of A and B.

a. 40:87

b. 87:41

c. 40:89

d. 41:77

e. 21:40

13. Questions

Find the difference between the profit share of A and the value of 12y.

a. Rs. 24200

b. Rs. 24500

c. Rs. 18790

d. Rs. 32180

e. Rs. 15600

14. Questions

Find the amount of total profit share of B and C together.

a. Rs. 32000

b. Rs. 63000

c. Rs. 28000

d. Rs. 26000

e. Rs. 31000

15. Questions

P and Q entered into a partnership by investing Rs. x and Rs y/5 for 18 months and 24 months respectively. Find the ratio of profit share of P and Q.

a. 15:17

b. 15:23

c. 2:11

d. 23:15

e. 21:17

16. Questions

Suresh has a sum of Rs. 4x with him. He invested 40% of the sum at 10% per annum in simple interest for 3 years. He then invested the amount of interest received by him along with the remaining sum at 20% per annum compound interest for a year and received Rs. 720 as interest. Find the value of x.

a. Rs. 1250

b. Rs. 1500

c. Rs. 980

d. Rs. 760

e. Rs. 1800

17. Questions

P invested Rs. (x +60) in the business for 3.5 years, and Q invested Rs. (2x -100) for 1.5 years in the same business. If the ratio of the profit share of P to Q is 119:69, then find the initial investment of Q.

a. Rs. 450

b. Rs. 460

c. Rs. 520

d. Rs. 440

e. Rs. 620

18. Questions

A mixture contains milk and water in the ratio of 7:5, respectively. If 25% of the mixture is taken out and replaced with 15 litres of milk and 75 litres of water, then the ratio of the final quantity becomes 4:5 respectively. Find the difference between the initial quantity of water and milk.

a. 45 litres

b. 26 litres

c. 40 litres

d. 36 litres

e. 55 litres

19. Questions

The ages of A and B are (x+4) and (y - 6), respectively. The sum of the present ages of A and B is 88 years, and the ratio of A's age 14 years before to B's age 4 years before is 3:4. Find the value of xy.

a. 2500

b. 2000

c. 3200

d. 3000

e. 4200

20. Questions

There are three villages, P, Q, and R, and the ratio of the total population is 12:15:20, respectively. If the number of females in villages P, Q, and R is 20%, 45%, and 40% of the total population, respectively, Find the ratio between the number of males in P, Q, and R.

a. 64: 55: 80

b. 55: 64: 80

c. 77: 67: 80

d. 77: 64: 55

e. 61: 54: 77

21. Questions

The ratio of the speed of the boat to the speed of the stream is 9:7 respectively. The time taken to cover 160 km downstream is 2 hours more than the time taken to cover 12 km upstream. Find the speed of the stream.

a. 18 km/hr
b. 14 km/hr
c. 8 km/hr
d. 9 km/hr
e. 16 km/hr

22. Questions

A can complete a work in 24 days. B is 20% less efficient than A, and C takes 10 days less than B to complete the same work. Find the time taken to complete 60% of the work while A, B, C are working together.

a. 5 hours
b. 4.8 hours
c. 6.2 hours
d. 8 hours
e. 5.6 hours

23. Questions

There is a circular field with an area of 2464 cm^2. If the height of the cylinder is calculated when the number which is both (square and cube but less than 100) and is divided by 16, and the radius is the same as that of circle, then find the volume of the cylinder.

a. 9856 cm^3
b. 8869 cm^3
c. 7890 cm^3
d. 9780 cm^3
e. 6790 cm^3

24. Questions

A train of length (x +50) m can cross a man moving with a speed of 5 m/s in the opposite direction towards the train in 10 seconds, and it can cross a man in 25 seconds when a man is moving in the same direction with a speed of 10 m/s. Find the speed of the train.

a. 20 m/s

b. 25 m/s

c. 15 m/s

d. 45 m/s

e. 33 m/s

25. Questions

There are three consecutive even numbers. The product of the first two consecutive even numbers is 528. If the third even number is added with x and increased by 220%, then the value becomes 96. Find the value of x/2.

a. 2

b. 6

c. 5

d. 4

e. 3

26. Questions

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

40% of 20^2 + 4 * ?+ 8^2 = 428

a. 56

b. 51

c. 39

d. 49

e. 67

27. Questions

25% of 440 – 30% of 720 = ? - ∛???

a. -180

b. -100

c. 120

d. 100

e. -220

28. Questions

{21 *6 * 12/(7 of 4)} + 24 * 8 - 4 = ?

a. 315

b. 242

c. 280

d. 150

e. 245

29. Questions

√(81% of 400) * 9 + 2 * ? = 22 * 3^2

a. 18

b. 30

c. 26

d. 42

e. 32

30. Questions

114 + √121 + 42% of 800 = ?

a. 450

b. 420

c. 461

d. 500

e. 250

31. Questions

Find out the wrong number in the following number series.

108, 8, 152, -44, 215

a. 8

b. -44

c. 215

d. 110

e. 152

32. Questions

204, 228, 276, 350, 372

a. 350

b. 228

c. 372

d. 204

e. 228

33. Questions

15, 21, 29, 39, 41

a. 41

b. 39

c. 15

d. 29

e. 21

34. Questions

69, 49, 31, 15, 4

a. 4

b. 15

c. 49

d. 69

e. 31

35. Questions

2196, 2743, 3374, 4096, 4912

a. 2196

b. 4096

c. 2743

d. 4912

e. 3375

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). $x^2 - 4x - 96=0$

ii). $y^2 + 11x + 28 = 0$

a. $x > y$

b. $x \geq y$

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

d. $x < y$

e. $x \leq y$

37. Questions

i). $5x^2 + 2x - 24=0$

ii). $y^2 + 16y + 55 = 0$

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). $x^2 – 29x + 210 =0$

ii). $y^2 + y - 132=0$

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). $x^2 - 12x + 36 =0$

ii). $y^2 + 30y + 209 =0$

a. $x > y$

b. $x \geq y$

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

d. x < y

e. x ≤ y

40. Questions

i). $x^2 - 12x - 189 = 0$

ii). $y^2 + 6y - 216 = 0$

a. x > y

b. x ≥ y

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

d. x < y

e. x ≤ y

Explanations:

1. Questions

30% - 18% = 360

12% = 360

The total number of cycle manufactured in all companies together = 3000

The total number of cycles manufactured in company A = 3000 * 18/100 = 540

The number of gear cycles manufactured in company A = 540 * 11/18 = 330

The number of folding cycles manufactured in company A = 540 * 7/18 = 210

Similarly,

Company	The total number of cycles manufactured	The number of gear cycles manufactured	The number of folding cycles manufactured
A	540	330	210
B	660	300	360
C	150	90	60
D	750	180	570
E	900	440	460

Answer: B

The number of gear cycles manufactured in company F = 90 * 3/1 = 270

The number of folding cycles manufactured in company F = 360 – 9 = 351

The total number of cycles manufactured in company F = 351 + 270 = 621

540 * (110 +x)/100 = 621

54 * (110 + x) = 6210

110 + x = 115

x =5

2. Questions

30% - 18% = 360

12% = 360

The total number of cycle manufactured in all companies together = 3000

The total number of cycles manufactured in company A = 3000 * 18/100 = 540

The number of gear cycles manufactured in company A = 540 * 11/18 = 330

The number of folding cycles manufactured in company A = 540 * 7/18 = 210

Similarly,

Company	The total number of cycles manufactured	The number of gear cycles manufactured	The number of folding cycles manufactured
A	540	330	210
B	660	300	360
C	150	90	60
D	750	180	570
E	900	440	460

Answer: B

Let, the number of brand P cycles manufactured = 7x

The number of brand Q cycles manufactured = 2y

5x + y = 90 --->(1)

2x + y = 60 --->(2)

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

x = 10, y = 40

The number of brand Q Gear cycles manufactured = 40

3. Questions

30% - 18% = 360

12% = 360

The total number of cycle manufactured in all companies together = 3000

The total number of cycles manufactured in company A = 3000 * 18/100 = 540

The number of gear cycles manufactured in company A = 540 * 11/18 = 330

The number of folding cycles manufactured in company A = 540 * 7/18 = 210

Similarly,

Company	The total number of cycles manufactured	The number of gear cycles manufactured	The number of folding cycles manufactured
A	540	330	210
B	660	300	360
C	150	90	60
D	750	180	570
E	900	440	460

Answer: B

The total number of Cycles manufactured in company B = 660

The number of cycles sold in company B = 660 * 35/100 = 231

The number of cycles unsold in company B = 660 * 65/100 = 429

The number of Gear cycles unsold in company B = 429 * 6/13 = 198

The number of folding cycles unsold in company B = 429 * 7/13 = 231

The number of Gear cycles sold in company B = 300 – 198 = 102

The number of folding cycles sold in company B = 231-102 = 129

Required difference = 129-102 = 27

4. Questions

30% - 18% = 360

12% = 360

The total number of cycle manufactured in all companies together = 3000

The total number of cycles manufactured in company A = 3000 * 18/100 = 540

The number of gear cycles manufactured in company A = 540 * 11/18 = 330

The number of folding cycles manufactured in company A = 540 * 7/18 = 210

Similarly,

Company	The total number of cycles manufactured	The number of gear cycles manufactured	The number of folding cycles manufactured
A	540	330	210
B	660	300	360
C	150	90	60
D	750	180	570
E	900	440	460

Answer: C

The total number of cycles manufactured in company E = 900

The number of Gear cycles manufactured in company E = 300

Required percentage = (900 – 300)/300 * 100 = 200%

5. Questions

30% - 18% = 360

12% = 360

The total number of cycle manufactured in all companies together = 3000

The total number of cycles manufactured in company A = 3000 * 18/100 = 540

The number of gear cycles manufactured in company A = 540 * 11/18 = 330

The number of folding cycles manufactured in company A = 540 * 7/18 = 210

Similarly,

Company	The total number of cycles manufactured	The number of gear cycles manufactured	The number of folding cycles manufactured
A	540	330	210
B	660	300	360
C	150	90	60
D	750	180	570
E	900	440	460

Answer: B

The total number of folding cycles manufactured in all companies together = (210 + 360 + 60 + 570 + 460) = 1660

Required average = 1660/5 = 332

6. Questions

x + y + 75 = 100

x + y = 25 ----> (1)

z + y + 65 = 100

z + y = 35 ----> (2)

x^2 + 5x – 150 =0

x^2 + 15x – 10x – 150 = 0

(x + 15) (x -10) =0

x = -15, 10

x = 10, y = 15, z = 20

Days	The number of TVs sold	The number of fridges sold
Monday	300	720
Tuesday	750	900
Wednesday	900	360
Thursday	600	1080
Friday	450	540

Answer: B

The number of fans sold on Tuesday = 720 * 85/100 = 612

The number of fans sold on Wednesday = 612 + 53 = 665

7. Questions

x + y + 75 = 100

x + y = 25 ----> (1)

z + y + 65 = 100

z + y = 35 ----> (2)

x^2 + 5x – 150 =0

x^2 + 15x – 10x – 150 = 0

(x + 15) (x -10) =0

x = -15, 10

x = 10, y = 15, z = 20

Days	The number of TVs sold	The number of fridges sold
Monday	300	720
Tuesday	750	900
Wednesday	900	360
Thursday	600	1080
Friday	450	540

Answer: A

The number of TVs sold on Wednesday = 900

The number of males who bought TV on Wednesday = 900 * 10/25 = 360

The number of females who bought TV on Wednesday = 900 * 15/25 = 540

The number of females who bought TV on Friday = 540 * 80/100 = 432

The number of males who bought TV on Friday = 450 – 432 = 18

8. Questions

x + y + 75 = 100

x + y = 25 ----> (1)

z + y + 65 = 100

z + y = 35 ----> (2)

$x^2 + 5x – 150 = 0$

$x^2 + 15x – 10x – 150 = 0$

(x + 15) (x -10) =0

x = -15, 10

x = 10, y = 15, z = 20

Days	The number of TVs sold	The number of fridges sold
Monday	300	720
Tuesday	750	900
Wednesday	900	360
Thursday	600	1080
Friday	450	540

Answer: A

Let, the number of LG items = 2x

The Samsung items = 13y

x + 3y = 300 --->(1)

x + 10y = 720 ---->(2)

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

x = 120, y = 60

The number of LG TVs sold = 120

9. Questions

x + y + 75 = 100

x + y = 25 ----> (1)

z + y + 65 = 100

z + y = 35 ----> (2)

$x^2 + 5x – 150 = 0$

$x^2 + 15x – 10x – 150 = 0$

(x + 15) (x -10) =0

x = -15, 10

x = 10, y = 15, z = 20

Days	The number of TVs sold	The number of fridges sold
Monday	300	720
Tuesday	750	900
Wednesday	900	360
Thursday	600	1080
Friday	450	540

Answer: A

The number of TVs sold on Tuesday =750

The number of Fridges sold on Friday = 540

Required difference = (750 – 540) = 210

10. Questions

x + y + 75 = 100

x + y = 25 ----> (1)

z + y + 65 = 100

z + y = 35 ----> (2)

$x^2 + 5x – 150 = 0$

$x^2 + 15x – 10x – 150 = 0$

$(x + 15) (x -10) =0$

$x = -15, 10$

$x = 10, y = 15, z = 20$

Days	The number of TVs sold	The number of fridges sold
Monday	300	720
Tuesday	750	900
Wednesday	900	360
Thursday	600	1080
Friday	450	540

Answer: D

The number of TVs sold on Thursday = 600

The number of fridges sold on Wednesday = 360

Required ratio = 600:360 = 5:3

11. Questions

Let, the initial investment of A = 5x

The initial investment of C = 4x

And , The initial investment of B= y

The ratio of profit share of A, B and C = (5x * 4 + (5x +400) *8) : (y * 6) + (y + 500) * 6 : (4x * 6) + (4x -200) * 6

= (20x + 40x + 3200): (6y + 6y + 3000): (24x + 24x – 1200)

= (60x + 3200): (12y +3000): (48x – 1200)

(60x + 3200)/(48x – 1200) = 38/21

1260x + 67200 = 1824x – 45600

564x = 112800

x = 200

8400/(12y + 3000) = 1/2

16800 = 12y + 3000

13800 = 12y

y = 1150

The ratio of profit share of A, B and C = 76: 84: 42 = 38 : 42 : 21

The profit share of A = 101000 * 38/101 = Rs. 38000

The profit share of B = 101000 * 42/101 = Rs. 42000

The profit share of C = 101000 * 21/101 = Rs. 21000

Answer: B

The amount invested in compound interest = 6 * 1150 = Rs. 6900

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

CI = 6900 * 1.2 * 1.2 – 6900

CI = 3036

12. Questions

Let, the initial investment of A = 5x

The initial investment of C = 4x

And , The initial investment of B= y

The ratio of profit share of A, B and C = (5x * 4 + (5x +400) *8) : (y * 6) + (y + 500) * 6 : (4x * 6) + (4x -200) * 6

= (20x + 40x + 3200): (6y + 6y + 3000): (24x + 24x – 1200)

= (60x + 3200): (12y +3000): (48x – 1200)

(60x + 3200)/(48x – 1200) = 38/21

1260x + 67200 = 1824x – 45600

564x = 112800

x = 200

8400/(12y + 3000) = 1/2

16800 = 12y + 3000

13800 = 12y

y = 1150

The ratio of profit share of A, B and C = 76: 84: 42 = 38 : 42 : 21

The profit share of A = 101000 * 38/101 = Rs. 38000

The profit share of B = 101000 * 42/101 = Rs. 42000

The profit share of C = 101000 * 21/101 = Rs. 21000

Answer: A

The value of x after decreased = 200 * 40/100 = 80

The value of y after increased = 1150 + 50 = 1200

The ratio of profit share of A and B = (60x + 3200): (12y +3000)

= (60 * 80 + 3200): (12 * 1200 + 3000)

= 8000:17400 = 40:87

13. Questions

Let, the initial investment of A = 5x

The initial investment of C = 4x

And , The initial investment of B= y

The ratio of profit share of A, B and C = (5x * 4 + (5x +400) *8) : (y * 6) + (y + 500) * 6 : (4x * 6) + (4x -200) * 6

= (20x + 40x + 3200): (6y + 6y + 3000): (24x + 24x – 1200)

= (60x + 3200): (12y +3000): (48x – 1200)

(60x + 3200)/(48x – 1200) = 38/21

1260x + 67200 = 1824x – 45600

564x = 112800

x = 200

8400/(12y + 3000) = 1/2

16800 = 12y + 3000

13800 = 12y

y = 1150

The ratio of profit share of A, B and C = 76: 84: 42 = 38 : 42 : 21

The profit share of A = 101000 * 38/101 = Rs. 38000

The profit share of B = 101000 * 42/101 = Rs. 42000

The profit share of C = 101000 * 21/101 = Rs. 21000

Answer: A

The profit share of A = Rs. 38000

The value of 12y = 12 * 1150 = 13800

Required difference = (38000 – 13800) = 24200

14. Questions

Let, the initial investment of A = 5x

The initial investment of C = 4x

And , The initial investment of B= y

The ratio of profit share of A, B and C = (5x * 4 + (5x +400) *8) : (y * 6) + (y + 500) * 6 : (4x * 6) + (4x -200) * 6

= (20x + 40x + 3200): (6y + 6y + 3000): (24x + 24x – 1200)

= (60x + 3200): (12y +3000): (48x – 1200)

(60x + 3200)/(48x – 1200) = 38/21

1260x + 67200 = 1824x – 45600

564x = 112800

x = 200

8400/(12y + 3000) = 1/2

16800 = 12y + 3000

13800 = 12y

y = 1150

The ratio of profit share of A, B and C = 76: 84: 42 = 38 : 42 : 21

The profit share of A = 101000 * 38/101 = Rs. 38000

The profit share of B = 101000 * 42/101 = Rs. 42000

The profit share of C = 101000 * 21/101 = Rs. 21000

Answer: B

The total profit share of B and C = (42000 + 21000) = Rs. 63000

15. Questions

Let, the initial investment of A = 5x

The initial investment of C = 4x

And , The initial investment of B= y

The ratio of profit share of A, B and C = (5x * 4 + (5x +400) *8) : (y * 6) + (y + 500) * 6 : (4x * 6) + (4x -200) * 6

= (20x + 40x + 3200): (6y + 6y + 3000): (24x + 24x – 1200)

= (60x + 3200): (12y +3000): (48x – 1200)

(60x + 3200)/(48x – 1200) = 38/21

1260x + 67200 = 1824x – 45600

564x = 112800

x = 200

8400/(12y + 3000) = 1/2

16800 = 12y + 3000

13800 = 12y

y = 1150

The ratio of profit share of A, B and C = 76: 84: 42 = 38 : 42 : 21

The profit share of A = 101000 * 38/101 = Rs. 38000

The profit share of B = 101000 * 42/101 = Rs. 42000

The profit share of C = 101000 * 21/101 = Rs. 21000

Answer: B

The profit share of P and Q = (200 * 18): (230 * 24)

= 3600:5520 = 15:23

16. Questions

Answer: A

According to the question,

SI = PNR/100

The 40% of the sum invested = 4x * 40/100 = 1.6x

SI = 1.6x * 3 * 10/100

SI = 0.48x

The amount invested in compound interest = (0.48x + 2.4x) = Rs. 2.88x

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

720 = 2.88x * 1.2 – 2.88x

720 = 0.576x

x = 1250

17. Questions

Answer: B

According to the question,

The profit share of P and Q = (x +60) *3.5: (2x -100) * 1.5

= (3.5x + 210): (3x – 150)

(3.5x + 210)/(3x – 150) = 119/69

241.5x + 14490 = 357x – 17850

115.5x = 32340

x = 280

The initial investment of Q = 2 * 280 – 100 = Rs. 460

18. Questions

Answer: C

According to the question,

Let, the initial quantity of milk in the mixture = 7x

The initial quantity of water in the mixture = 5x

[(7x *0.75) + 15]/[(5x * 0.75) + 75] = 4/5

(5.25x + 15)/(3.75x + 75) = 4/5

26.25x + 75 = 15x + 300

11.25x = 225

x = 20

Required difference = 2* 20 = 40 litres

19. Questions

Answer: B

According to the question,

(x + 4)+ (y – 6) =88

x + y = 90 --->(1)

[(x + 4) – 14]/[(y -6) -4] = 3/4

(x – 10)/(y -10) = 3/4

4x – 3y = 10 --->(2)

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

x = 40, y= 50

The value of xy = 40 * 50 = 2000

20. Questions

Answer: A

According to the question,

Let, the total population in village P = 12x

The male population in village P = 12x * 80/100 = 9.6x

Let, the total population in village Q = 15x

The male population in village Q = 15x * 55/100 = 8.25x

Let, the total population in village R = 20x

The male population in village R = 20x * 60/100 = 12x

Required ratio = 64: 55: 80

21. Questions

Answer: B

According to the question,

Let, the speed of the boat = 9x

The speed of the stream = 7x

(160/16x) = 2 + (12/2x)

(10/x) = 2 + 6/x

(10/x) = (2x + 6)/x

10 = 2x + 6

x = 2

The speed of the stream = 7 * 2 = 14 km/hr

22. Questions

Answer: B

According to the question,

The time taken by B to complete the work = 24/0.8 = 30 days

The time taken by C to complete the work = 30 – 10 = 20 days

Let, the total work = 120 units/day

The efficiency of A = 120/24 = 5 units/day

The efficiency of B = 120/30 = 4 units

The efficiency of C = 120/20 = 6 days

Time taken = (120 * 60/100)/15 = 4.8 hours

23. Questions

Answer: A

According to the question,

Let, the radius of the circle = r cm

r^2 = (2464 * 7)/22

r^2 = 784

r = 28 cm

The height of the cylinder = 64/16 = 4 cm

Volume of the cylinder = $\pi r^2 h$ cm^3

= (22/7) * 28 * 28 * 4

= 9856 cm^3

24. Questions

Answer: A

According to the question,

Let, the speed of the train = s

(x +50)/(s + 5) = 10

(x + 50) = 10s + 50

(x + 50) /(s – 10) = 25

10s + 50 = 25s – 250

15s = 300

s = 20

The speed of the train = 20 m/s

25. Questions

Answer: A

According to the question

Let,

The three consecutive numbers = x, x+2, x+4

x * (x+2)= 528

x^2 +2x – 528 = 0

x = 22 or x = -24

x = 22

The third number = 22 + 4 = 26

(26 + x) * 320/100 = 96

(26 + x) * 3.2 = 96

26 + x = 30

x = 4

The value of x/2 = 2

26. Questions

Answer: B

40% of 20^2 + 4 * ?+ 8^2 = 428

(40/100) * 400 + 4 * ? + 64 = 428

160 + 4 * ? + 64 = 428

224 + 4 * ? = 428

4 * ? = 204

? = 51

27. Questions

Answer: B

25% of 440 – 30% of 720 = ? - $\sqrt[3]{216}$

110 – 216 = ? – 6

-106 = ? – 6

? = -100

28. Questions

Answer: B

{21 *6 * 12/(7 of 4)} + 24 * 8 - 4 = ?

54 + 192 – 4 = ?

246 – 4 = ?

? = 242

29. Questions

Answer: A

√(81% of 400) * 9 + 2 * ? = 22 * 3^2

√324 * 9 + 2 * ? = 198

18 * 9 + 2 * ? = 198

162 + 2 * ? = 198

2 * ? = 36

? = 18

30. Questions

Answer: C

114 + √121 + 42% of 800 = ?

114 + 11 + 336 = ?

? = 461

31. Questions

Answer: C

$108 - 10^2 = 8$

$8 + 12^2 = 152$

$152 - 14^2 = -44$

$-44 + 16^2 = 212$

32. Questions

Answer: A

12 * 17 = 204

12 * 19 = 228

12 * 23 = 276

12 * 29 = 348

12 * 31 = 372

33. Questions

Answer: B

2 * 1 + 13 = 15

2 * 2 + 17 = 21

2 * 3 + 23 = 29

2 * 4 + 29 = 37

2 * 5 + 31 = 41

34. Questions

Answer: A

69 – 20 = 49

49 – 18 = 31

31 – 16 = 15

15 – 14 = 1

35. Questions

Answer: B

$13^3 - 1 = 2196$

$14^3 - 1 = 2743$

$15^3 - 1 = 3374$

$16^3 - 1 = 4095$

$17^3 - 1 = 4912$

36. Questions

Answer: C

$x^2 - 4x - 96=0$

$x^2 - 12x + 8x -96=0$

$(x -12) (x +8) = 0$

$x= 12, -8$

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

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

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

$y = -7, -4$

Hence, x=y or relationship cannot be determined

37. Questions

Answer: A

$5x^2 + 2x – 24 = 0$

$5x^2 + 12x - 10x - 24=0$

$x = -2.4, 2$

$y^2 + 16y + 55 = 0$

$y^2 + 11y + 5y + 55 =0$

$(y + 11) (y + 5) =0$

$y = -11, -5$

Hence, $x > y$

38. Questions

Answer: A

$x^2 – 29x + 210 = 0$

$x^2 - 15x - 14x + 210 = 0$

$(x - 15)(x - 14) = 0$

$x = 15, 14$

$y^2 + y - 132 = 0$

$y^2 + 12y - 11y - 132 = 0$

$(y + 12)(y - 11) = 0$

$y = -12, 11$

Hence, $x > y$

39. Questions

Answer: A

$x^2 - 12x + 36 = 0$

$x^2 - 6x - 6x + 36 = 0$

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

$x = 6, 6$

$y^2 + 30y + 209 = 0$

$y^2 + 19y + 11y + 209 = 0$

$(y + 19)(y + 11) = 0$

$y = -19, -11$

Hence, $x > y$

40. Questions

Answer: C

$x^2 - 21x + 9x - 189 = 0$

$(x - 21)(x + 9) = 0$

$x = 21, -9$

$y^2 + 6y - 216 = 0$

$y^2 + 18y - 12y - 216 = 0$

$(y + 18)(y - 12) = 0$

$y = -18, 12$

Hence, x=y or relationship cannot be determined