

## 1. Questions

**Study the following information carefully and answer the following questions.**

The given table graph shows the number of sweaters(Crew neck + Polo neck ) produced by five different companies namely A, B, C, D and E. It also shows the difference between the number of Crew neck sweaters manufactured and the number of Polo neck sweaters produced in these companies.

| Name of the company | Total number of sweaters produced | Difference between the number of crew neck sweaters produced and the number of Polo neck sweaters produced |
|---------------------|-----------------------------------|------------------------------------------------------------------------------------------------------------|
| A                   | 800                               | 400                                                                                                        |
| B                   | 1040                              | 400                                                                                                        |
| C                   | 560                               | 200                                                                                                        |
| D                   | 1440                              | 900                                                                                                        |
| E                   | 300                               | 100                                                                                                        |

**Note:**

**I).** Total number of sweaters produced = Number of Crew neck sweaters produced + Number of Polo neck sweaters produced.

**II).** Total number of sweaters produced = Number of sweaters sold + Number of sweaters unsold.

**III).** The number of crew neck sweaters produced is greater than the number of polo neck sweaters produced.

**If the number of sweaters sold by companies B and C is 66.66% and 25% of the number of sweaters unsold in these companies respectively. Find the total number of sweaters sold by these companies together.**

- a. 100
- b. 690
- c. 528
- d. 258
- e. 825

## 2. Questions

**What is the difference between the average number of crew neck sweaters produced by company A and B together and the average number of Polo neck sweaters produced by company D and E together?**

- a. 380
- b. 574

- c. 281
- d. 754
- e. 475

### 3. Questions

If 30% of the total number of Crew neck sweaters produced by company A is S% of the total number of sweaters produced by company E. Find the value of (S+20).

- a. 160
- b. 80
- c. 40
- d. 70
- e. 100

### 4. Questions

The ratio between the number of sold to unsold Polo neck Sweaters in companies B and C is 1:4 and 4:5 respectively. Find the difference between the number of unsold polo sweaters in both the companies together.

- a. 156
- b. 390
- c. 760
- d. 295
- e. 170

### 5. Questions

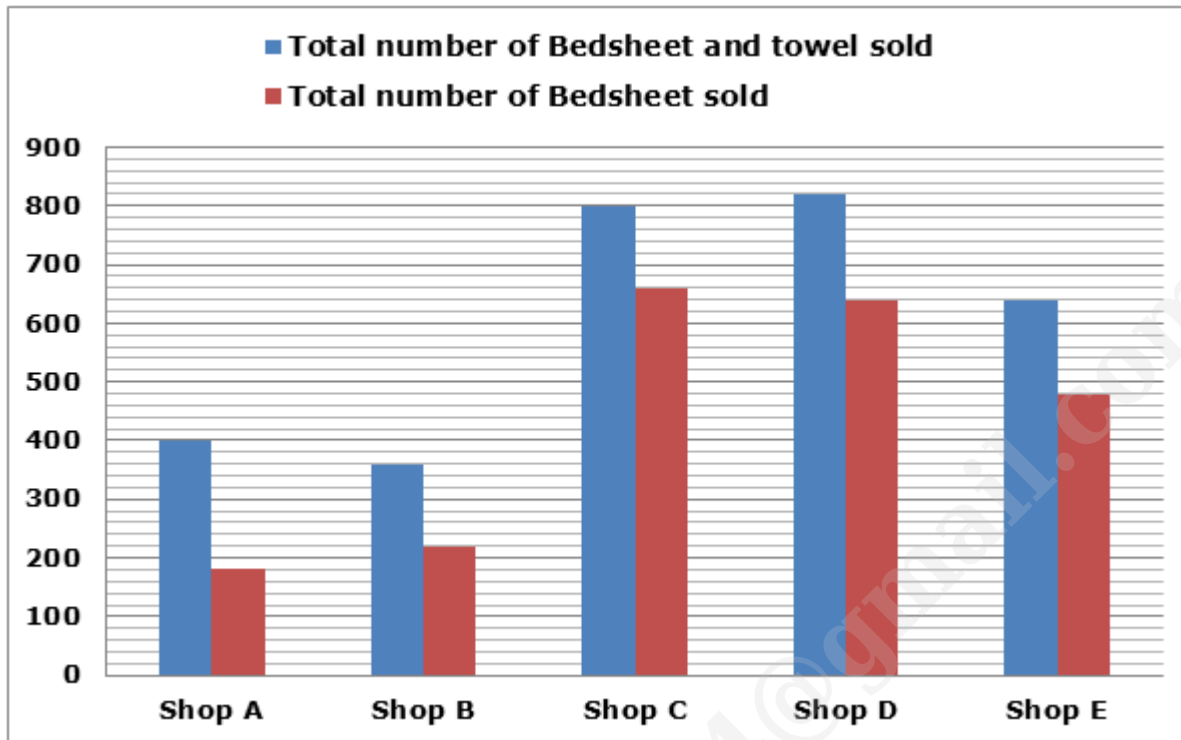
The selling price of each crew neck sweater is Rs.1500 and the selling price of each polo neck sweater is Rs.1400. Each crew neck sweater and polo neck sweater makes a profit of Rs.200 and Rs.100 respectively. Find the total profit made by company E after selling 25% of each sweater that is produced by company E.

- a. Rs.23690
- b. Rs.4590
- c. Rs.67800
- d. Rs.12500
- e. Rs.51200

### 6. Questions

Study the following information carefully and answer the following questions.

Given bar graph shows the number of Bedsheets and Towels sold by five shopkeepers namely A, B, C, D and E in January 2024 and the total number of Bedsheets sold by these companies together.



Note :

i). Total number of articles sold = Number of towels sold + number of Bedsheets sold

The number of bedsheets sold in shop A is P% of the total number of articles sold by shop B and the total number of towels sold by shop E is Q% of the total number of articles sold by shop C. Find the value of (P+Q).

- 90
- 10
- 100
- 50
- 70

7. Questions

The ratio between the total number of towels sold to unsold in shops A and B is 2:1 and 2:7 respectively. The Number of towels unsold in shop A is how much more or less than that of B.

- 561 more
- 803 less
- 710 less
- 380 less

e. 400 more

#### 8. Questions

The selling price of each bedsheet which is sold in shops D and E is Rs.200 and Rs.900 respectively. Find the average selling price of each bedsheet that is sold in both companies.

- a. 500
- b. 600
- c. 4100
- d. 800
- e. 100

#### 9. Questions

20% of the difference between the number of bedsheets sold in shops A and E is what percentage of the total number of articles sold in shop C?

- a. 8.1%
- b. 7.5%
- c. 5%
- d. 9.4%
- e. 6.99%

#### 10. Questions

Find the ratio between the total number of Towels sold in shops C and E to the total number of Bedsheets sold in shops A and B together.

- a. 3:1
- b. 2:5
- c. 5:1
- d. 6:7

#### 11. Questions

Ramesh Marked up the price of the television at 40% above its cost price and sold at  $\frac{3}{7}$ th of its Marked price. The cost price of the refrigerator is same as the selling price of the television. If the difference between the cost price of the refrigerator and the Marked price of the television is Rs.800, then find the difference between the Cost price of both articles.

- a. Rs.150
- b. Rs.560

- c. Rs.200
- d. Rs.400
- e. Rs.570

## 12. Questions

A 480-litre mixture contains milk and water in a ratio of 2:3 respectively. If P litre of milk is taken out and replaced with water, then the ratio between the milk and water becomes 3:5, then find the value of 'P+20'.

- a. 32
- b. 45
- c. 17
- d. 12
- e. 56

## 13. Questions

A boat covers a distance of 120 km upstream in 6 hours. If the speed of the boat downstream is 20% more than the speed of the boat in still water, then what is the distance covered by the boat along with the stream in 5 hours?

- a. 350 km
- b. 450 km
- c. 110 km
- d. 59 km

## 14. Questions

Four years ago, the age of Nina was four times the age of Sami 5 years ago. If the present age of Sami is 45% of the present age of Nina, then find the present age of Sami.

- a. 25 years
- b. 2 years
- c. 7 years
- d. 9 years
- e. 5 years

## 15. Questions

The ratio between the sides of the two squares is 2:3 respectively and the difference between the area of the two squares is 320 sq.meters, Find the area of the larger square.

- a.  $890 \text{ m}^2$
- b.  $576 \text{ m}^2$
- c.  $270 \text{ m}^2$
- d.  $180 \text{ m}^2$
- e.  $721 \text{ m}^2$

**16. Questions**

**A and B entered into a partnership with an investment of Rs.4,14,000 and Rs.7,29,000. After 3 months, C joined with the investment of Rs.1,44,000. If the difference between the profit share received by A and C at the end of one year is Rs.1360. Find the profit amount received by C.**

- a. Rs.900
- b. Rs.840
- c. Rs.104
- d. Rs.510
- e. Rs.480

**17. Questions**

**Anu divided 20% of her salary among her three friends, Ritu, Renuka and Reema. The amount received by Ritu is 20% more than the amount received by Renuka which is Rs.200 less than the amount received by Reema. The difference between the amount received by Ritu and Reema is Rs.400. Find the monthly salary of Anu.**

- a. Rs.49000
- b. Rs.50000
- c. Rs.51230
- d. Rs.25000
- e. Rs.78900

**18. Questions**

**Train 'A' can cross a pole in 20 seconds. The length of train B is 40% more than the length of train A, and the ratio between the speed of train A to train B is 5:7. Find the time taken by both trains to cross each other when they are crossing each other in opposite directions. The length of train A is 500 meters.**

- a. 2 sec
- b. 5 sec

- c. 20 sec
- d. 15 sec
- e. 25 sec

**19. Questions**

A can do a piece of work in 30 days whereas B can do the same work in 25 days. The efficiency of C is 20% more than the efficiency of A. Find the time taken by C and B to complete 60% of the work, when they are working together.

- a. 9.5 days
- b. 10 days
- c. 5 days
- d. 8 days
- e. 7.5 days

**20. Questions**

Reeshu invested some amount in scheme A and scheme B in the ratio of 3:4. The money he invested in scheme A, offers 20% per annum at compound interest and the amount which is invested in scheme B offers 30% per annum at simple interest. If at the end of 2 years, Reeshu got a total interest of Rs.7,440. Find the difference between the amount that he deposited in these schemes.

- a. Rs.4900
- b. Rs.1200
- c. Rs.500
- d. Rs.2000
- e. Rs.2050

**21. Questions**

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

$$\sqrt{324} * 13 + ? * 5 = 79 * \sqrt{121}$$

- a. 114
- b. 118
- c. 122
- d. 127
- e. 110

**22. Questions**

$$8 * (? + 25) = 16^2$$

- a. 8
- b. 5
- c. 7
- d. 9
- e. 2

**23. Questions**

$$(8)^? * 4 = 64^2 \div (16)^{(1/4)}$$

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

**24. Questions**

$$(741 \div 19) * \sqrt{25} + 2520 \div \sqrt{196} = ?^2 - \sqrt{625}$$

- a. 23
- b. 24
- c. 18
- d. 16
- e. 20

**25. Questions**

$$18 * 14 + ?^2 - 281 = 13 * 20$$

- a. 17
- b. 19
- c. 13
- d. 21
- e. 15

**26. Questions**



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

$$39.891\% \text{ of } 224.91 + \sqrt{961} = ?^2$$

- a. 11
- b. 13
- c. 15
- d. 18
- e. 21

27. Questions

$$\sqrt{8650} * ? + 13.12^2 = 175.09\% \text{ of } 520.195$$

- a. 5
- b. 8
- c. 10
- d. 11
- e. 3

28. Questions

$$(38.19 * 14.98) \div (\sqrt{5040} - \sqrt{2700}) = ?$$

- a. 28
- b. 25
- c. 30
- d. 36
- e. 39

29. Questions

$$(2847.17 \div \sqrt{530}) * (3587.91 \div 72.94) = ?^2$$

- a. 78
- b. 75
- c. 81
- d. 84
- e. 87

30. Questions

**135% of 1400 – 18 \* 9 = ?<sup>3</sup>**

- a. 11
- b. 8
- c. 12
- d. 14
- e. 15

**31. Questions**

**Find out the missing number in the following number series.**

**17, 19, 28, 48, 83, ?**

- a. 137
- b. 147
- c. 159
- d. 130
- e. 141

**32. Questions**

**25, 78, 137, 198, 265, ?**

- a. 298
- b. 312
- c. 336
- d. 328
- e. 284

**33. Questions**

**13, 31, 66, ?, 272, 545**

- a. 128
- b. 124
- c. 130
- d. 135
- e. 138

**34. Questions**

**4, 8, 20, 60, ?, 840**

- a. 190
- b. 210
- c. 200
- d. 240
- e. 180

**35. Questions**

**2, 26, 54, 88, 130, ?**

- a. 169
- b. 172
- c. 176
- d. 182
- e. 193

**36. Questions**

**Find out the wrong number in the following number series.**

**1.2, 6, 24, 72, 144, 288**

- a. 72
- b. 6
- c. 144
- d. 288
- e. 24

**37. Questions**

**46, 110, 159, 97, 72, 88**

- a. 159
- b. 88
- c. 110
- d. 72
- e. 97

**38. Questions**

**1, 5, 17, 37, 65, 108**

- a. 65
- b. 5
- c. 108
- d. 37
- e. 17

**39. Questions**

**13, 24, 34, 49, 67, 88**

- a. 24
- b. 88
- c. 34
- d. 67
- e. 49

**40. Questions**

**3, 16, 42, 59, 79, 94**

- a. 94
- b. 16
- c. 42
- d. 79
- e. 59

**41. Questions**

**In each of the following questions, two equations are given. You have to solve both the equations to find the relation between x and y.**

**I).  $x^2 - 32x + 256 = 0$**

**II).  $y^2 + 5y - 336 = 0$**

- a.  $x > y$
- b.  $x \geq y$
- c.  $x = y$  or relationship can't be determined
- d.  $x < y$
- e.  $x \leq y$

**42. Questions**

**I).**  $x^2 + x - 156 = 0$

**II).**  $y^2 + 13y - 140 = 0$

- a.  $x > y$
- b.  $x \geq y$
- c.  $x = y$  or relationship can't be determined
- d.  $x < y$
- e.  $x \leq y$

**43. Questions**

**I).**  $x^2 - 4x - 21 = 0$

**II).**  $y^2 + 8y + 15 = 0$

- a.  $x > y$
- b.  $x \geq y$
- c.  $x = y$  or relationship can't be determined.
- d.  $x < y$
- e.  $x \leq y$

**44. Questions**

**I).**  $x^2 - 3x + 2 = 0$

**II).**  $y^2 - 2y + 1 = 0$

- a.  $x > y$
- b.  $x \geq y$
- c.  $x = y$  or relationship can't be determined
- d.  $x < y$
- e.  $x \leq y$

**45. Questions**

**I).**  $3x + y = 13$

**II).**  $2x + 3y = 18$

- 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

#### For company A:

Total number of sweaters produced = 800

Number of crew neck sweaters produced =  $(800 + 400)/2 = 600$

Number of Polo neck sweaters produced =  $800 - 600 = 200$

#### For company B :

Total number of sweaters produced = 1040

Number of crew neck sweaters produced =  $(1040 + 400)/2 = 720$

Number of Polo neck sweaters produced =  $1040 - 720 = 320$

#### For company C:

Total number of sweaters produced = 560

Number of crew neck sweaters produced =  $(560 + 200)/2 = 380$

Number of Polo neck sweaters produced =  $560 - 380 = 180$

#### For company D:

Total number of sweaters produced = 1440

Number of crew neck sweaters produced =  $1440 + 900/2 = 1170$  Number of Polo neck sweaters produced =  $1440 - 1170 = 270$

#### For company E:

Total number of sweaters produced = 300

Number of crew neck sweaters produced =  $300 + 100/2 = 200$

Number of Polo neck sweaters produced =  $300 - 200 = 100$

**Answer: C**

#### For company B

Let the total number of sweaters unsold =  $3x$

Total number of sweaters sold =  $2x$

$$5x=1040$$

$$x=208$$

$$\text{Total number of sweaters sold}=208*2=416$$

**For company C**

$$\text{Let the total number of sweaters unsold}=4x$$

$$\text{Total number of sweaters sold}=x$$

$$5x=560$$

$$x=112$$

$$\text{Total number of sweaters sold}=112$$

$$\text{Required answer}=112+416=528$$

**2. Questions****For company A:**

$$\text{Total number of sweaters produced}=800$$

$$\text{Number of crew neck sweaters produced}=(800+400)/2=600$$

$$\text{Number of Polo neck sweaters produced}=800-600=200$$

**For company B :**

$$\text{Total number of sweaters produced}=1040$$

$$\text{Number of crew neck sweaters produced}=(1040+400)/2=720$$

$$\text{Number of Polo neck sweaters produced}=1040-720=320$$

**For company C:**

$$\text{Total number of sweaters produced}=560$$

$$\text{Number of crew neck sweaters produced}=(560+200)/2=380$$

$$\text{Number of Polo neck sweaters produced}=560-380=180$$

**For company D:**

$$\text{Total number of sweaters produced}=1440$$

$$\text{Number of crew neck sweaters produced}=1440+900/2=1170 \quad \text{Number of Polo neck sweaters produced}=1440-1170=270$$

**For company E:**

$$\text{Total number of sweaters produced}=300$$

$$\text{Number of crew neck sweaters produced}=300+100/2=200$$

$$\text{Number of Polo neck sweaters produced}=300-200=100$$

**Answer: E**

The average number of crew neck sweaters produced by company A and B together  $= (600 + 720) / 2 = 660$

The average number of Polo neck sweaters produced by company D and E together  $= (270 + 100) / 2 = 185$

Required difference  $= 660 - 185 = 475$

### 3. Questions

**For company A:**

Total number of sweaters produced  $= 800$

Number of crew neck sweaters produced  $= (800 + 400) / 2 = 600$

Number of Polo neck sweaters produced  $= 800 - 600 = 200$

**For company B :**

Total number of sweaters produced  $= 1040$

Number of crew neck sweaters produced  $= (1040 + 400) / 2 = 720$

Number of Polo neck sweaters produced  $= 1040 - 720 = 320$

**For company C:**

Total number of sweaters produced  $= 560$

Number of crew neck sweaters produced  $= (560 + 200) / 2 = 380$

Number of Polo neck sweaters produced  $= 560 - 380 = 180$

**For company D:**

Total number of sweaters produced  $= 1440$

Number of crew neck sweaters produced  $= 1440 + 900 / 2 = 1170$  Number of Polo neck sweaters produced  $= 1440 - 1170 = 270$

**For company E:**

Total number of sweaters produced  $= 300$

Number of crew neck sweaters produced  $= 300 + 100 / 2 = 200$

Number of Polo neck sweaters produced  $= 300 - 200 = 100$

**Answer: B**

30% of the total number of crew neck sweaters produced by company A  $= 600 * 30 / 100 = 180$

$S = 180 / 300 * 100 = 60\%$

$S + 20 = 80$

Required answer  $= 80$

### 4. Questions



**For company A:**

Total number of sweaters produced = 800

Number of crew neck sweaters produced =  $(800 + 400) / 2 = 600$

Number of Polo neck sweaters produced =  $800 - 600 = 200$

**For company B :**

Total number of sweaters produced = 1040

Number of crew neck sweaters produced =  $(1040 + 400) / 2 = 720$

Number of Polo neck sweaters produced =  $1040 - 720 = 320$

**For company C:**

Total number of sweaters produced = 560

Number of crew neck sweaters produced =  $(560 + 200) / 2 = 380$

Number of Polo neck sweaters produced =  $560 - 380 = 180$

**For company D:**

Total number of sweaters produced = 1440

Number of crew neck sweaters produced =  $1440 + 900 / 2 = 1170$  Number of Polo neck sweaters produced =  $1440 - 1170 = 270$

**For company E:**

Total number of sweaters produced = 300

Number of crew neck sweaters produced =  $300 + 100 / 2 = 200$

Number of Polo neck sweaters produced =  $300 - 200 = 100$

**Answer: A**

Total number of Polo neck sweaters unsold in company B =  $320 / 5 * 4 = 256$

Total number of Polo neck sweaters unsold in company C =  $180 / 9 * 5 = 100$

Required difference =  $256 - 100 = 156$

**5. Questions****For company A:**

Total number of sweaters produced = 800

Number of crew neck sweaters produced =  $(800 + 400) / 2 = 600$

Number of Polo neck sweaters produced =  $800 - 600 = 200$

**For company B :**

Total number of sweaters produced = 1040

Number of crew neck sweaters produced  $= (1040 + 400) / 2 = 720$

Number of Polo neck sweaters produced  $= 1040 - 720 = 320$

**For company C:**

Total number of sweaters produced  $= 560$

Number of crew neck sweaters produced  $= (560 + 200) / 2 = 380$

Number of Polo neck sweaters produced  $= 560 - 380 = 180$

**For company D:**

Total number of sweaters produced  $= 1440$

Number of crew neck sweaters produced  $= 1440 + 900 / 2 = 1170$  Number of Polo neck sweaters produced  $= 1440 - 1170 = 270$

**For company E:**

Total number of sweaters produced  $= 300$

Number of crew neck sweaters produced  $= 300 + 100 / 2 = 200$

Number of Polo neck sweaters produced  $= 300 - 200 = 100$

**Answer: D**

Total profit earned by selling crew neck sweaters in company E  $= 200 * 200 * 1/4 = \text{Rs.} 10000$

Total profit earned by selling Polo neck sweaters in company E  $= 100 * 100 / 4 = \text{Rs.} 2500$

Required profit  $= 2500 + 10,000 = \text{Rs.} 12,500$

**6. Questions**

| Shop name | Total number of Bed sheets and Towels sold | Total number of Bedsheets sold | Total number of towels sold |
|-----------|--------------------------------------------|--------------------------------|-----------------------------|
| A         | 400                                        | 180                            | 220                         |
| B         | 360                                        | 220                            | 140                         |
| C         | 800                                        | 660                            | 140                         |
| D         | 820                                        | 640                            | 180                         |
| E         | 640                                        | 480                            | 160                         |

**Answer: E**

$P = 180 / 360 * 100 = 50$

$Q = 160 / 800 * 100 = 20$

Required answer  $= 50 + 20 = 70$

**7. Questions**

| Shop name | Total number of Bed sheets and Towels sold | Total number of Bedsheets sold | Total number of towels sold |
|-----------|--------------------------------------------|--------------------------------|-----------------------------|
| A         | 400                                        | 180                            | 220                         |
| B         | 360                                        | 220                            | 140                         |
| C         | 800                                        | 660                            | 140                         |
| D         | 820                                        | 640                            | 180                         |
| E         | 640                                        | 480                            | 160                         |

**Answer: D**

Number of towels unsold in shop A =  $220/2 \times 1 = 110$

Number of towels unsold in shop B =  $140/2 \times 7 = 490$

Required answer =  $490 - 110 = 380$  less

### 8. Questions

| Shop name | Total number of Bed sheets and Towels sold | Total number of Bedsheets sold | Total number of towels sold |
|-----------|--------------------------------------------|--------------------------------|-----------------------------|
| A         | 400                                        | 180                            | 220                         |
| B         | 360                                        | 220                            | 140                         |
| C         | 800                                        | 660                            | 140                         |
| D         | 820                                        | 640                            | 180                         |
| E         | 640                                        | 480                            | 160                         |

**Answer: A**

Total number of bedsheets sold in shop D = 640

Total number of bedsheets sold in shop E = 480

By mixture and allegation:

200    900

X

640    480

$900 - X / X - 200 = 4/3$

$2700 - 3X = 4X - 800$

$7X = 3500$

$X = 500$

Required answer = 500

### 9. Questions

| Shop name | Total number of Bed sheets and Towels sold | Total number of Bedsheets sold | Total number of towels sold |
|-----------|--------------------------------------------|--------------------------------|-----------------------------|
| A         | 400                                        | 180                            | 220                         |
| B         | 360                                        | 220                            | 140                         |
| C         | 800                                        | 660                            | 140                         |
| D         | 820                                        | 640                            | 180                         |
| E         | 640                                        | 480                            | 160                         |

**Answer: B**

According to the question,

$$20/100 \times (480 - 180) = 60$$

$$\text{Required percentage} = 60/800 \times 100 = 7.5\%$$

**10. Questions**

| Shop name | Total number of Bed sheets and Towels sold | Total number of Bedsheets sold | Total number of towels sold |
|-----------|--------------------------------------------|--------------------------------|-----------------------------|
| A         | 400                                        | 180                            | 220                         |
| B         | 360                                        | 220                            | 140                         |
| C         | 800                                        | 660                            | 140                         |
| D         | 820                                        | 640                            | 180                         |
| E         | 640                                        | 480                            | 160                         |

**Answer: C**

Total number of Towels sold in shops C and E together =  $140 + 160 = 300$

Total number of Bedsheets sold in shops A and B together =  $180 + 220 = 400$

Required answer = 3:4

**11. Questions**

**Answer: D**

Let the cost Price of the television = Rs.  $100x$

Marked price =  $100x \times 140/100 = \text{Rs. } 140x$

Selling price of the television =  $140x \times 3/7 = \text{Rs. } 60x$

Cost price of the refrigerator = Rs.  $60x$

According to the question,

$$140x - 60x = 800$$

$$x = 10$$

Difference between the cost price of both the articles =  $40x = \text{Rs.}400$

## 12. Questions

**Answer: A**

Initial quantity of Milk =  $480/5 \times 2 = 192$  litres

Initial quantity of water =  $40/5 \times 3 = 288$  litres

When the same quantity of milk is taken out and replaced with water in the same quantity, in that case, the total quantity remains the same.

So the final quantity of milk =  $480/8 \times 3 = 180$  litres

Final quantity of water =  $480/8 \times 5 = 300$  litres

Value of P =  $192 - 180 = 12$

Required answer =  $20 + 12 = 32$

## 13. Questions

**Answer: E**

Let the speed of the boat in still water =  $x$

Speed of the stream =  $y$

$120/6 = 20 \text{ km/hr} = x - y$

$x + y = 120/100 \times x$

$5x + 5y = 6x$

$5y = x$

$x/y = 5/1$

$4's = 20$

$1's = 5$

Speed of the boat in still water =  $5 \times 5 = 25 \text{ km/hr}$

Speed of the stream =  $5 \times 1 = 5 \text{ km/hr}$

Downstream speed =  $30 \text{ km/hr}$

Distance covered in 5 hours =  $5 \times 30 = 150 \text{ km}$

Required answer =  $150 \text{ km}$

## 14. Questions

**Answer: D**

According to the question,

Let the age of Sami 5 years ago =  $x$

Present age of Nina =  $4x+4$

Present age of Sami =  $x+5$

$$4x+4/x+5=20/9$$

$$36x+36=20x+100$$

$$16x=64$$

$$x=4$$

Present age of Sami = 9 years

Required answer = 9 years

### 15. Questions

**Answer: B**

Sides of two square is  $2x$  and  $3x$  respectively

According to the question,

$$9x^2 - 4x^2 = 320$$

$$5x^2 = 320$$

$$x^2 = 64$$

$$x = 8$$

$$\text{Area of larger square} = (3 \times 8)^2 = 24^2 = 576 \text{ m}^2$$

### 16. Questions

**Answer: E**

According to the question,

Profit share Ratio of A, B and C

$$4,14,000 \times 12 : 7,29,000 \times 12 : 1,44,000 \times 9$$

$$= 46:81:12$$

According to the question,

$$(46-12)'s = 1360$$

$$1's = 40$$

$$\text{Profit made by C} = 40 \times 12 = \text{Rs.} 480$$

### 17. Questions

**Answer: A**

Let the amount received by Ritu = Rs.  $6x$

Amount received by Renuka = Rs.5x

Amount received by Reema = Rs.(5x+200)

According to the question,

$$6x - 5x - 200 = 400$$

$$x = 600$$

Total amount received by her friends =  $16x + 200 = \text{Rs.}9800$

Monthly salary of Anu =  $9800/20 \times 100 = \text{Rs.}49000$

### 18. Questions

**Answer: C**

Length of train A = 500 m

Length of train B =  $500 \times 140/100 = 700$  m

Speed of train A =  $500/20 = 25$  m/s

Speed of train B =  $25/5 \times 7 = 35$  m/s

Time taken to cross each other =  $1200/60 = 20$  sec

### 19. Questions

**Answer: E**

Let the total work = 150 units

Efficiency of A =  $150/30 = 5$  units/day

Efficiency of B =  $150/25 = 6$  units/day

Efficiency of C =  $5 \times 6/5 = 6$  units/day

Time taken to complete 60% of the work =  $(60/100 \times 150)/12 = 90/12 = 7.5$  days

### 20. Questions

**Answer: D**

Let the amount he deposited in scheme A = Rs.300x

Let the amount he deposited in scheme B = Rs.400x

Interest in scheme A =  $300x \times 44/100 = \text{Rs.}132x$

Interest in scheme B =  $400x \times 60/100 = \text{Rs.}240x$

$$372x = 7440$$

$$x = 20$$

Required answer =  $20 \times 100 = \text{Rs.}2,000$

### 21. Questions

**Answer: D**

$$\sqrt{324} * 13 + ? * 5 = 79 * \sqrt{121}$$

$$234 + ? * 5 = 869$$

$$? = 127$$

**22. Questions****Answer: C**

$$8 * (? + 25) = 16^2$$

$$? = 7$$

**23. Questions****Answer: B**

$$(8)^? * 4 = 64^2 \div (16)^{(1/4)}$$

$$8^? * 4 = 2048$$

$$? = 3$$

**24. Questions****Answer: E**

$$(741 \div 19) * \sqrt{25} + 2520 \div \sqrt{196} = ?^2 - \sqrt{625}$$

$$195 + 180 = ?^2 - 25$$

$$400 = ?^2$$

$$? = 20$$

**25. Questions****Answer: A**

$$18 * 14 + ?^2 - 281 = 13 * 20$$

$$? = 17$$

**26. Questions****Answer: A**

$$39.891\% \text{ of } 224.91 + \sqrt{961} = ?^2$$

$$90 + 31 = ?^2$$

$$? = 11$$

**27. Questions**



**Answer: B**

$$\sqrt{8650} * ? + 13.12^2 = 175.09\% \text{ of } 520.195$$

$$93 * ? + 169 = 910$$

$$? = 8$$

**28. Questions****Answer: C**

$$(38.19 * 14.98) \div (\sqrt{5040} - \sqrt{2700}) = ?$$

$$? = 30$$

**29. Questions****Answer: A**

$$(2847.17 \div \sqrt{530}) * (3587.91 \div 72.94) = ?^2$$

$$? = 78$$

**30. Questions****Answer: C**

$$135\% \text{ of } 1400 - 18 * 9 = ?^3$$

$$1890 - 162 = ?^3$$

$$1728 = ?^3$$

$$? = 12$$

**31. Questions****Answer: A**

$$17 + 2 * 1 = 19$$

$$19 + 3 * 3 = 28$$

$$28 + 4 * 5 = 48$$

$$48 + 5 * 7 = 83$$

$$83 + 6 * 9 = \mathbf{137}$$

**32. Questions****Answer: C**

$$25 + 53 = 78$$

$$78 + 59 = 137$$

$$137 + 61 = 198$$

$$198 + 67 = 265$$

$$265 + 71 = \mathbf{336}$$

**33. Questions**

**Answer: D**

$$13 * 2 + 5 = 31$$

$$31 * 2 + 4 = 66$$

$$66 * 2 + 3 = \mathbf{135}$$

$$135 * 2 + 2 = 272$$

$$272 * 2 + 1 = 545$$

**34. Questions**

**Answer: B**

$$4 * 2 = 8$$

$$8 * 2.5 = 20$$

$$20 * 3 = 60$$

$$60 * 3.5 = \mathbf{210}$$

$$210 * 4 = 840$$

**35. Questions**

**Answer: D**

$$2 + 24 = 26$$

$$26 + 28 = 54$$

$$54 + 34 = 88$$

$$88 + 42 = 130$$

$$130 + 52 = \mathbf{182}$$

**36. Questions**

**Answer: D**

$$1.2 * 5 = 6$$

$$6 * 4 = 24$$

$$24 * 3 = 72$$

$$72 * 2 = 144$$

$$144 * 1 = \mathbf{144}$$

**37. Questions**

**Answer: A**

$$46 + 8^2 = 110$$

$$110 - 7^2 = \mathbf{61}$$

$$61 + 6^2 = 97$$

$$97 - 5^2 = 72$$

$$72 + 4^2 = 88$$

**38. Questions**

**Answer: C**

$$1 + (4 * 1) = 5$$

$$5 + (4 * 3) = 17$$

$$17 + (4 * 5) = 37$$

$$37 + (4 * 7) = 65$$

$$65 + (4 * 9) = \mathbf{101}$$

**39. Questions**

**Answer: A**

$$13 + 9 = \mathbf{22}$$

$$22 + 12 = 34$$

$$34 + 15 = 49$$

$$49 + 18 = 67$$

$$67 + 21 = 88$$

**40. Questions**

**Answer: C**

$$3 + (13 * 1) = 16$$

$$16 + (11 * 2) = \mathbf{38}$$

$$38 + (7 * 3) = 59$$

$$59 + (5 * 4) = 79$$

$$79 + (3 * 5) = 94$$

**41. Questions**

**Answer: B**

$$x^2 - 32x + 256 = 0$$

$$x^2 - 16x - 16x + 256 = 0$$

$$x(x - 16) - 16(x - 16) = 0$$

$$x = 16, 16$$

$$y^2 + 5y - 336 = 0$$

$$y^2 + 21y - 16y - 336 = 0$$

$$y(y + 21) - 16(y + 21) = 0$$

$$y = -21, 16$$

$$x \geq y$$

**42. Questions****Answer: C**

$$x^2 + x - 156 = 0$$

$$x^2 + 13x - 12x - 156 = 0$$

$$x(x + 13) - 12(x + 13) = 0$$

$$x = 12, -13$$

$$y^2 + 13y - 140 = 0$$

$$y^2 + 20y - 7y - 140 = 0$$

$$y(y + 20) - 7(y + 20) = 0$$

$$y = 7, -20$$

Relationship between x and y cannot established.

**43. Questions****Answer: B**

$$x^2 - 4x - 21 = 0$$

$$x^2 - 7x + 3x - 21 = 0$$

$$x(x - 7) + 3(x - 7) = 0$$

$$x = 7, -3$$

$$y^2 + 8y + 15 = 0$$

$$y^2 + 5y + 3y + 15 = 0$$

$$y(y + 5) + 3(y + 5) = 0$$

$$y = -5, -3$$

$$x \geq y$$

**44. Questions**

**Answer: B**

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

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

$$x(x - 2) - 1(x - 2) = 0$$

$$x = 1, 2$$

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

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

$$y(y - 1) - 1(y - 1) = 0$$

$$y = 1, 1$$

$$x \geq y$$

**45. Questions**

**Answer: D**

$$3x + y = 13 \text{ -----(1)}$$

$$2x + 3y = 18 \text{ -----(2)}$$

From (1) and (2)

$$7x = 21$$

$$x = 3$$

$$y = 13 - 9 = 4$$

$$x < y$$