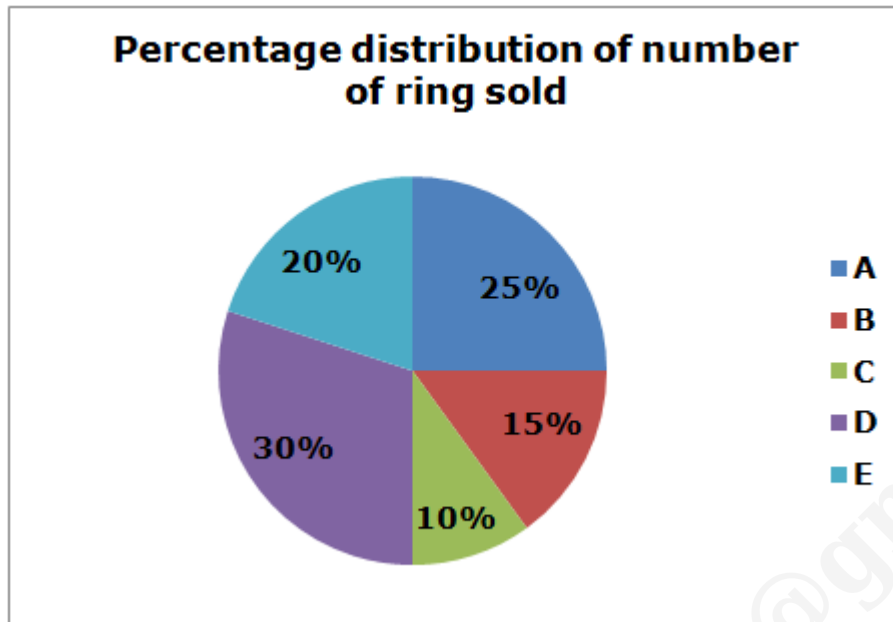


1. Questions

Study the following information carefully and answer the questions.

The given pie chart shows the percentage distribution of the number of rings sold (gold +silver) in five different shops A, B, C, D and E respectively. The total number of rings sold in all shops is 6000.



The given table shows the ratio of the number of gold to silver rings sold in five different shops namely A, B, C, D and E respectively.

Shop	Ratio of the number of gold to silver rings sold
A	7:8
B	5:4
C	3:2
D	5:1
E	7:5

The ratio of the number of gold to platinum rings sold in shop C is 6:9. The number of platinum rings sold in shop D is $\frac{1}{6}$ more than that in shop C. If the ratio of the number of platinum rings sold to unsold in shop D is 9:7, then find the number of platinum rings unsold in shop D.

- 630
- 490
- 560
- 420
- 770

2. Questions

The number of gold rings sold in shop F is 2% more than that of shop B, and the number of silver rings sold in shop F is 8% less than that of shop D. If the ratio of the number of yellow, white and rose gold rings sold in shop F is 6:7:4 respectively, then find the difference between the number of yellow and rose gold rings and the number of silver rings sold in shop F.

- a. 20
- b. 24
- c. 30
- d. 40
- e. 45

3. Questions

In shop A, if the number of gold rings sold is decreased by $x\%$ and the number of silver rings sold is increased by $2x\%$, then the total number of rings becomes 1590. Find the value of x .

- a. 15
- b. 20
- c. 10
- d. 8
- e. 25

4. Questions

Find the difference between the number of gold ring sold in shop B and the number of silver ring sold in shop C.

- a. 280
- b. 260
- c. 320
- d. 300
- e. 420

5. Questions

Find the ratio between the number of gold ring sold in shop D and the number of silver ring sold in shop E.

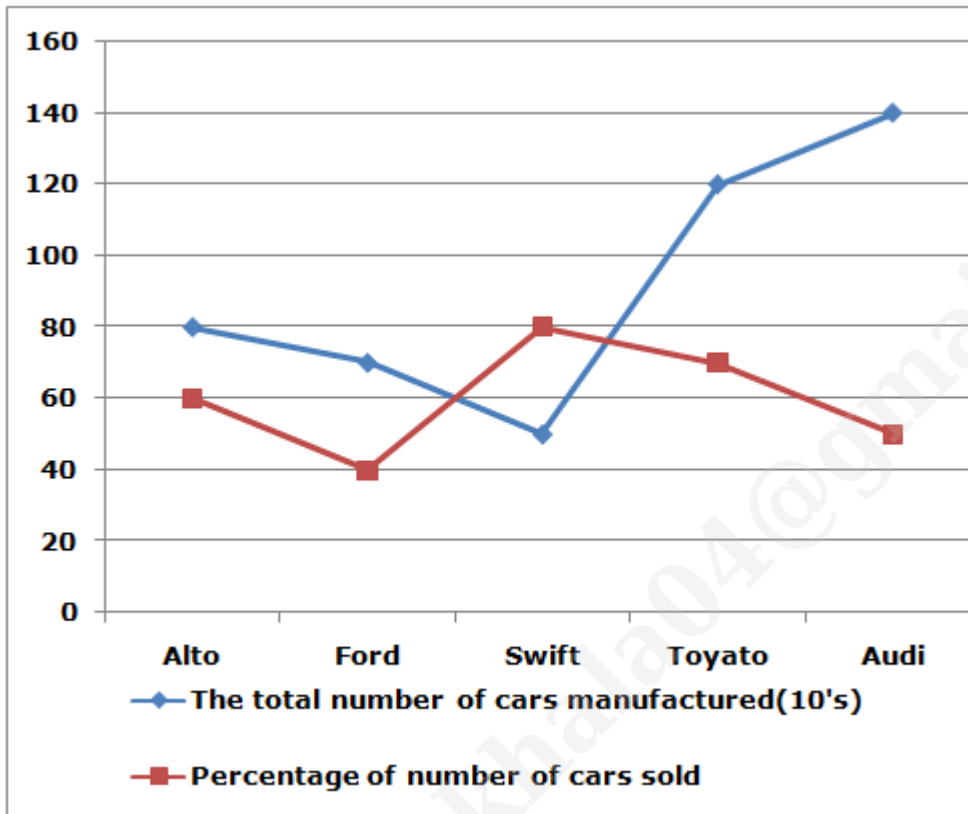
- a. 2:1
- b. 3:1
- c. 5:3
- d. 2:9

e. 1:6

6. Questions

Study the following information carefully and answer the questions.

The given line graph shows the total number of cars manufactured (both sold and unsold) in tens and the percentage of the number of cars sold by five different car companies namely Alto, Ford, Swift, Toyota and Audi respectively.



Out of the number of Alto cars sold, 60% are non-defective, and the rest are defective. The total number of defective cars sold by Alto and Ford is 400. Find the number of non-defective cars sold by Ford.

- a. 88
- b. 72
- c. 90
- d. 56
- e. 70

7. Questions

The number of Skoda cars manufactured is $\frac{1}{7}$ less than that of Audi. The number of Skoda cars unsold is double the number of unsold Swift cars. Find the number of Skoda cars sold.

- a. 800
- b. 1000

- c. 900
- d. 700
- e. 960

8. Questions

The number of unsold Wagon car is equal to the difference between the number of Swift cars sold and the number of Toyota cars unsold. If 60% of Wagon cars are sold, then find the number of Wagon cars manufactured.

- a. 60
- b. 40
- c. 80
- d. 20
- e. 100

9. Questions

The ratio between the number of Audi cars sold to the number of Alto cars unsold is $x:y$. If the number of Toyota cars sold is $(7z + 8x)$ and the number of unsold ford car is $[17m + 9y + 4x]$, then find the sum of the values of m and z .

- a. 88
- b. 105
- c. 96
- d. 78
- e. 44

10. Questions

40% of the Swift cars are manufactured in factory A, and the remaining cars are manufactured in factory B. Find the total number of swift cars manufactured in factory B.

- a. 350
- b. 200
- c. 280
- d. 300
- e. 190

11. Questions

The following questions contain two statements as statement I and statement II. You have to

determine which statement/s is/are necessary to answer the question and give answer as,

A, B and C together complete a piece of work in 35 days. Find the time taken by A to complete the whole work alone.

Statement I: A is 25% less efficient than C who is twice as efficient as B.

Statement II: A and B together can complete the whole work in 63 days while A and C together can complete the whole work in 45 days.

- a. The data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question
- b. The data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question
- c. The data either in statement I alone or in statement II alone is sufficient to answer the question
- d. The data given in both statements I and II together are not sufficient to answer the question
- e. The data given in both statements I and II together are necessary to answer the question.

12. Questions

Arun bought an article from the shopkeeper. Find the cost of the article.

Statement I: Arun brought the article for Rs. 4500.

Statement II: The shopkeeper marked up the article by 25% above its cost price and sold it at a discount of Rs. 500.

- a. The data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question
- b. The data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question
- c. The data either in statement I alone or in statement II alone is sufficient to answer the question
- d. The data given in both statements I and II together are not sufficient to answer the question
- e. The data given in both statements I and II together are necessary to answer the question.

13. Questions

There are two numbers, a and b. Find out whether b is an integer or not.

Statement I: $ab < (a/b)$

Statement II: $(a+b) > (a-b)$

- a. The data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question
- b. The data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question

- c. The data either in statement I alone or in statement II alone is sufficient to answer the question
- d. The data given in both statements I and II together are not sufficient to answer the question
- e. The data given in both statements I and II together are necessary to answer the question.

14. Questions

Find the curved surface area of the cylinder?

Statement I: The ratio of the radius and height of the cylinder is 7:3 and the volume of the cylinder is 12474 cm^3 .

Statement II: Total surface area of the cylinder is 1760 cm^2 and the sum of the height and radius of the cylinder is 20 cm.

- a. The data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question
- b. The data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question
- c. The data either in statement I alone or in statement II alone is sufficient to answer the question
- d. The data given in both statements I and II together are not sufficient to answer the question
- e. The data given in both statements I and II together are necessary to answer the question

15. Questions

What is the rate of interest?

Statement I: The difference between the SI and CI is Rs.124.27 for 2 years of the sum of Rs.4300.

Statement II: The sum of Rs.4500 invested in a simple interest scheme for 4 years and after 4 years, the total amount received from the scheme is 80% more than the sum invested.

- a. The data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question
- b. The data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question
- c. The data either in statement I alone or in statement II alone is sufficient to answer the question
- d. The data given in both statements I and II together are not sufficient to answer the question
- e. The data given in both statements I and II together are necessary to answer the question.

16. Questions

A 128-litre bottle of milk and water contains 24 litres more water than milk in it. After replacing 64 litres of this mixture with y litres of milk, the ratio of the quantity of milk to water in the resultant mixture becomes 1:1. Find the value of y.

- a. 11
- b. 18
- c. 12
- d. 19
- e. 25

17. Questions

A started a business by investing Rs. 6,000. After 10 months, B joined the business by investing Rs. 4000, and after 10 more months, C joined them by investing Rs. 5000. If the total profit earned by A, B, and C together at the end of 5 years is Rs. 19000, then find the profit share of A.

- a. Rs. 8500
- b. Rs. 9000
- c. Rs. 12000
- d. Rs. 5000
- e. Rs. 11000

18. Questions

Ajay invested Rs. 12000 in simple interest at a rate of 12% p.a. for 4 years. He then invested twice the interest received in SI in compound interest at a rate of 25% p.a. for 2 years. Find the interest received in compound interest.

- a. Rs. 6480
- b. Rs. 4250
- c. Rs. 5680
- d. Rs. 4800
- e. Rs. 5200

19. Questions

Four years ago, the ratio of the ages of Vinay and his father was 1:2, respectively. 4 years from now, the ratio of the ages of Vinay and his father will be 4:7, respectively. Find the present age of Vinay's father.

- a. 55 years
- b. 62 years
- c. 52 years
- d. 48 years
- e. 60 years

20. Questions

The cost price of the pen is Rs. 200, which is 20% less than the marked price. The selling price of the note is Rs. 80 more than the marked price of the pen, and it earned a profit of 10%. Find the cost of the note.

- a. Rs. 200
- b. Rs. 330
- c. Rs. 300
- d. Rs. 280
- e. Rs. 180

21. Questions

A boat covers 48 km in still water in 6 hours. The time taken by the boat to cover 80 km downstream and 60 km upstream together is how much percent more or less than the time taken by the boat to cover 100 km in the same stream in downstream given that the speed of the stream is 2 km/hr.

- a. 75% less
- b. 80% more
- c. 62.5% less
- d. 55% more
- e. 98% less

22. Questions

The ratio of the base to the height of isosceles triangle B is 2:1 and the area of isosceles triangle A is 10% less than that of isosceles triangle B. If the base and height of isosceles triangle A is 30 m and 24 m respectively, then find the sum of the base and height of isosceles triangle B?

- a. 56 m
- b. 42 m
- c. 60 m
- d. 36 m
- e. None of these

23. Questions

A alone can complete the work in x days and B alone can complete the work in $\frac{5x}{4}$ days and C alone can complete the work in $\frac{5x}{6}$ days and all three of them can complete the work in 12 days. Find the time taken by B and C together can complete the work.

- a. 24 days

- b. 20 days
- c. 18 days
- d. 15 days
- e. None of these

24. Questions

A man can catch a thief running at a speed of 54 km/hr who is 60 metres ahead of him in 12 seconds. Find the time taken by the man to catch another thief who is 168 metres ahead of him and is running at a speed that is 80% of the thief's speed.

- a. 21 seconds
- b. 10 seconds
- c. 22 seconds
- d. 15 seconds
- e. 18 seconds

25. Questions

The ratio of the number of biscuits to chocolates sold in shop A is 4:7. The number of biscuits and chocolates sold in shop B is 25% more than that of shop A and 20% less than that of shop A, respectively. If the total number of biscuits and chocolates sold in shop A is 440, then find the number of chocolates sold in shop B.

- a. 224
- b. 260
- c. 267
- d. 320
- e. 420

26. Questions

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

$15.99 + 20.01 - 123.5 = ? / 10$

- a. 878
- b. -875
- c. -880
- d. 670
- e. 780

27. Questions

$$(14.86 * 17.89 + 120.2) / 13.12 = ?$$

- a. 40
- b. 45
- c. 30
- d. 32
- e. 25

28. Questions

$$431.88 / 9.12 + 67.12 * 5.98 = ? * 18.22$$

- a. 18
- b. 25
- c. 32
- d. 17
- e. 16

29. Questions

$$(3132.32/8.94 + 64.21) = ? + 131.86$$

- a. 250
- b. 280
- c. 190
- d. 220
- e. 320

30. Questions

$$(163.12 + 246.91) * 8.76 / 82 = ?$$

- a. 44
- b. 39
- c. 42
- d. 45
- e. 55

31. Questions

Find out the wrong number in the following number series.

18, 45, 201, 618, 1872

- a. 1872
- b. 18
- c. 45
- d. 201
- e. 618

32. Questions

19, 38, 80, 152, 304

- a. 80
- b. 19
- c. 152
- d. 304
- e. 38

33. Questions

31, 36, 26, 42, 17

- a. 36
- b. 31
- c. 42
- d. 17
- e. 26

34. Questions

5, 7, 13, 25, 48

- a. 48
- b. 5
- c. 13
- d. 25
- e. 7

35. Questions

32, 34, 38, 42, 49

- a. 32
- b. 38
- c. 42
- d. 49
- e. 34

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). $x^2 + 19x + 34 = 0$

ii). $y^2 + 21y + 54 = 0$

- 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). $x^3 = -125$

ii). $y^2 + 17y + 72 = 0$

- 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). $x^2 - 5x = 36$

ii). $2y^2 + 11y + 12 = 0$

- 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). $x^2 - 22x + 120 = 0$

ii). $y^2 - 6y - 16 = 0$

- 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). $2x^2 + 7 = 15x$

ii). $y^2 - 8y + 12 = 0$

- 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 rings sold in shop A = $6000 * 25/100 = 1500$

The number of gold ring sold in shop A = $1500 * 7/15 = 700$

The number of silver ring sold in shop A = $1500 * 8/15 = 800$

Similarly,

Shop	The total number of ring sold	The number of gold ring sold	The number of silver ring sold
A	1500	700	800
B	900	500	400
C	600	360	240
D	1800	1500	300
E	1200	700	500

Answer: B

The number of gold ring sold in shop C = 360

The number of platinum ring sold in shop C = $360 \times \frac{9}{6} = 540$

The number of platinum ring sold in shop D = $540 + 540 \times \frac{1}{6} = 630$

The number of platinum ring unsold in shop D = $630 \times \frac{7}{9} = 490$

2. Questions

The total number of rings sold in shop A = $6000 \times \frac{25}{100} = 1500$

The number of gold ring sold in shop A = $1500 \times \frac{7}{15} = 700$

The number of silver ring sold in shop A = $1500 \times \frac{8}{15} = 800$

Similarly,

Shop	The total number of ring sold	The number of gold ring sold	The number of silver ring sold
A	1500	700	800
B	900	500	400
C	600	360	240
D	1800	1500	300
E	1200	700	500

Answer: B

The number of gold ring sold in shop F = $500 \times \frac{102}{100} = 510$

The number of silver ring sold in shop F = $300 \times \frac{92}{100} = 276$

The number of yellow and rose rings sold in shop F = $\frac{10}{17} \times 510$
= 300

Required difference = $300 - 276 = 24$

3. Questions

The total number of rings sold in shop A = $6000 \times \frac{25}{100} = 1500$

The number of gold ring sold in shop A = $1500 * 7/15 = 700$

The number of silver ring sold in shop A = $1500 * 8/15 = 800$

Similarly,

Shop	The total number of ring sold	The number of gold ring sold	The number of silver ring sold
A	1500	700	800
B	900	500	400
C	600	360	240
D	1800	1500	300
E	1200	700	500

Answer: C

The number of gold ring sold in shop A = $700 * (100-x)/100 = 700 - 7x$

The number of silver ring sold in shop A = $800 * (100+2x)/100 = 800+16x$

$$700-7x + 800+16x = 1590$$

$$1500 + 9x = 1590$$

$$9x = 90$$

$$x = 10$$

4. Questions

The total number of rings sold in shop A = $6000 * 25/100 = 1500$

The number of gold ring sold in shop A = $1500 * 7/15 = 700$

The number of silver ring sold in shop A = $1500 * 8/15 = 800$

Similarly,

Shop	The total number of ring sold	The number of gold ring sold	The number of silver ring sold
A	1500	700	800
B	900	500	400
C	600	360	240
D	1800	1500	300
E	1200	700	500

Answer: B

The number of gold ring sold in shop B = 500

The number of silver ring sold in shop C = 240

Required difference = $500 - 240 = 260$

5. Questions

The total number of rings sold in shop A = $6000 * 25/100 = 1500$

The number of gold ring sold in shop A = $1500 * 7/15 = 700$

The number of silver ring sold in shop A = $1500 * 8/15 = 800$

Similarly,

Shop	The total number of ring sold	The number of gold ring sold	The number of silver ring sold
A	1500	700	800
B	900	500	400
C	600	360	240
D	1800	1500	300
E	1200	700	500

Answer: B

The number of gold ring sold in shop D = 1500

The number of silver ring sold in shop E = 500

Required ratio = $1500: 500 = 3:1$

6. Questions

The total number of Alto cars manufactured = 800

The number of Alto cars sold = $800 * 60/100 = 480$

The number of Alto cars unsold = $800 * 40/100 = 320$

Similarly,

Cars	The total number of cars manufactured	The number of cars sold	The number of cars unsold
Alto	800	480	320
Ford	700	280	420
Swift	500	400	100
Toyota	1200	840	360
Audi	1400	700	700

Answer: B

The number of Alto cars sold = 480

The number of defective alto cars sold = $480 * 40/100 = 192$

The number of defective Ford cars sold = $400 - 192 = 208$

The number of non-defective ford cars sold = $280 - 208 = 72$

7. Questions

The total number of Alto cars manufactured = 800

The number of Alto cars sold = $800 * 60/100 = 480$

The number of Alto cars unsold = $800 * 40/100 = 320$

Similarly,

Cars	The total number of cars manufactured	The number of cars sold	The number of cars unsold
Alto	800	480	320
Ford	700	280	420
Swift	500	400	100
Toyota	1200	840	360
Audi	1400	700	700

Answer: B

The number of Skoda cars manufactured = $1400 - 1400/7 = 1200$

The number of unsold Skoda cars = $2 * 100 = 200$

The number of Skoda cars sold = $1200 - 200 = 1000$

8. Questions

The total number of Alto cars manufactured = 800

The number of Alto cars sold = $800 * 60/100 = 480$

The number of Alto cars unsold = $800 * 40/100 = 320$

Similarly,

Cars	The total number of cars manufactured	The number of cars sold	The number of cars unsold
Alto	800	480	320
Ford	700	280	420
Swift	500	400	100
Toyota	1200	840	360
Audi	1400	700	700

Answer: E

The number of Swift cars sold = 400

The number of Toyota cars unsold = 360

The number of unsold wagon cars = $400 - 360 = 40$

The number of wagon cars manufactured = $100/40 * 40 = 100$

9. Questions

The total number of Alto cars manufactured = 800

The number of Alto cars sold = $800 * 60/100 = 480$

The number of Alto cars unsold = $800 * 40/100 = 320$

Similarly,

Cars	The total number of cars manufactured	The number of cars sold	The number of cars unsold
Alto	800	480	320
Ford	700	280	420
Swift	500	400	100
Toyota	1200	840	360
Audi	1400	700	700

Answer: A

The number of Audi cars sold = 700

The number of Alto cars unsold = 320

Ratio = $x:y = 700:320 = 35:16$

$x = 35, y = 16$

$7z + 8 * 35 = 840$

$z = 80$

$17m + 9 * 16 + 4 * 35 = 420$

$17m = 136$

$m = 8$

$z + m = 8 + 80 = 88$

10. Questions

The total number of Alto cars manufactured = 800

The number of Alto cars sold = $800 * 60/100 = 480$

The number of Alto cars unsold = $800 * 40/100 = 320$

Similarly,

Cars	The total number of cars manufactured	The number of cars sold	The number of cars unsold
Alto	800	480	320
Ford	700	280	420
Swift	500	400	100
Toyota	1200	840	360
Audi	1400	700	700

Answer: D

The number of swift cars manufactured in factory B = $500 * 60/100 = 300$

11. Questions

Answer: C

For statement I:

Let, the efficiency of C be $4x$ units per day

The efficiency of A = $0.75 * 4x = 3x$ units

The efficiency of B = $4x/2 = 2x$ units

The total work = $(4x + 3x + 2x) * 35 = 315x$

Required time taken = $315x/3x = 105$ days

Data in statement I alone is sufficient to answer the question.

Statement II:

Let, the total amount of work = 315 units

The efficiency of A+B = $315/63 = 5$ units

The efficiency of A+C = $315/45 = 7$ units

The efficiency of A+B+C = $315/35 = 9$ units

The efficiency of C = $9 - 5 = 4$ units

The efficiency of A = $7 - 4 = 3$ units

Required time taken = $315/3 = 105$ days

Data in statement II alone is sufficient to answer the question.

12. Questions

Answer: E

Statement I:

The selling price of article = Rs. 4500

Statement I is not sufficient

Statement II:

Let, the cost price of the article = Rs. x

The marked price of the article = Rs. $1.25x$

The selling price of the article = Rs. $(1.25x - 500)$

Statement II alone is not sufficient to answer the question

Combining statement I and II

$$1.25x - 500 = 4500$$

$$1.25x = 5000$$

$$x = 5000/1.25$$

$$x = 4000$$

Data in both statements is sufficient to answer the question.

13. Questions

Answer: A

Statement I:

$$ab < (a/b)$$

$$b^2 < 1$$

$$b < 1 \text{ or } b > -1$$

If $b = 0$, then $a/0$ is undefined. So b is cannot be zero.

So, b is not an integer

Data in statement I alone is sufficient to answer the question

Statement II:

$$(a+b) > (a-b)$$

$$2b > 0$$

$$b > 0$$

Data in statement II alone is not sufficient to answer the question

14. Questions

Answer: C

From statement I,

Volume of the cylinder = $\frac{22}{7} * r * r * h$

$$(\frac{22}{7}) * 7x * 7x * 3x = 12474 \text{ cm}^3$$

$$x = 3$$

$$\text{CSA of the cylinder} = 2 * 22/7 * (7 * 3) * (3 * 3)$$

$$= 1188 \text{ cm}^2$$

So, Statement I alone is sufficient to answer the question.

From statement II,

$$\text{TSA of the cylinder} = 2 * 22/7 * r * (h+r)$$

$$\Rightarrow 2 * 22/7 * r * 20 = 1760 \text{ cm}^2$$

$$\text{Radius of the cylinder} = 14 \text{ cm}$$

$$\text{Height of the cylinder} = 20 - 14 = 6 \text{ cm}$$

$$\text{CSA of cylinder} = 2 * 22/7 * 14 * 6 = 528 \text{ cm}^2$$

So, Statement II alone is sufficient to answer the question.

15. Questions

Answer: C

From Statement I,

$$124.27 = (4300 * R * R) / (100 * 100)$$

$$R = 17\%$$

So, Statement I alone is sufficient to answer the question.

From Statement II,

$$(4500 * 180/100) - 4500 = 4500 * R * 4/100$$

$$R = 20\%$$

So, Statement II alone is sufficient to answer the question.

16. Questions

Answer: C

According to the question,

Let, the quantity of milk in the mixture = x litres

The quantity of water in the mixture = (x+24) litres

$$x + x + 24 = 128$$

$$2x = 104$$

$$x = 52$$

$$(52 - 26 + y) / (76 - 38) = 1/1$$

$$26 + y = 38$$

$$y = 12$$

17. Questions

Answer: B

According to the question,

The ratio of investment of A, B and C = $(6000 \times 60) : (4000 \times 50) : (5000 \times 40)$

$$= 36 : 20 : 20$$

$$= 18:10:10$$

$$= 9:5:5$$

The profit share of A = $19000 \times \frac{9}{19} = \text{Rs. } 9000$

18. Questions

Answer: A

According to the question,

$$SI = \frac{PNR}{100}$$

$$SI = 12000 \times \frac{12}{100} \times 4$$

$$SI = \text{Rs. } 5760$$

The amount invested in compound interest = $5760 \times 2 = \text{Rs. } 11520$

$$CI = P(1 + \frac{R}{100})^n - P$$

$$CI = 11520 \times 1.25 \times 1.25 - 11520$$

$$CI = \text{Rs. } 6480$$

19. Questions

Answer: C

According to the question,

4 years ago, the age of Vinay = x years

4 years ago, the age of Vinay's father = $2x$ years

4 years hence from now, the age of Vinay = $(x+8)$ years

4 years hence from now, the age of Vinay's father = $(2x+8)$ years

$$(x+8) : (2x+8) = 4:7$$

$$7x + 56 = 8x + 32$$

$$56 = x + 32$$

$$x = 24$$

The present age of Vinay's father = $2x + 4 = 52$ years

20. Questions

Answer: C

The cost price of the pen = Rs. 200

The marked price of the pen = $200 * 100/80 = \text{Rs. } 250$

The selling price of the note = $250 + 80 = \text{Rs. } 330$

$$CP * 110/100 = 330$$

$$CP = 330 * 100/110$$

$$CP = \text{Rs. } 300$$

21. Questions

Answer: B

According to the question,

Let, the speed of the boat in still water = x km/hr

$$x = 48/6$$

$$x = 8 \text{ km/hr}$$

$$\begin{aligned} \text{Time taken by the boat to cover 80 km downstream and 60 km upstream} &= (80/10) + (60/6) \\ &= 8 + 10 = 18 \text{ hours} \end{aligned}$$

$$\text{Time taken to cover 100 km} = (100/10) = 10 \text{ hours}$$

$$\text{Required percentage} = (8/10) * 100 = 80\% \text{ more}$$

22. Questions

Answer: C

$$\text{The area of isosceles triangle A} = 30 * 24/2 = 360 \text{ m}^2$$

$$\text{The area of isosceles triangle B} = 360 * 100/(100 - 10) = 360 * 100/90 = 400 \text{ m}^2$$

$$2x * 1x/2 = 400$$

$$x^2 = 400$$

$$x^2 = 20^2$$

$$x = 20$$

$$\text{The sum of the breadth and height of isosceles triangle A} = (2 + 1) * 20 = 3 * 20 = 60 \text{ m}$$

23. Questions

Answer: C

According to question,

$$1/A + 1/B + 1/C = 1/12$$

$$1/x + 4/5x + 6/5x = 1/12$$

$$(5 + 4 + 6)/5x = 1/12$$

$$15/5x = 1/12$$

$$x = 36 \text{ days}$$

$$\text{Time taken by B alone to complete the work} = 5 * 36/4 = 45 \text{ days}$$

$$\text{Time taken by C alone to complete the work} = 5 * 36/6 = 30 \text{ days}$$

$$1/B + 1/C = 1/45 + 1/30$$

$$= (2 + 3)/90$$

$$= 5/90 = 1/18$$

$$= 18 \text{ days}$$

Therefore, the time taken by B and C together can complete the work = 18 days

24. Questions

Answer: A

According to the question,

$$\text{The speed of the thief} = 54 * 5/18 = 15 \text{ m/s}$$

$$\text{The distance covered by the man in 12 seconds} = 15 * 12 + 60 = 240 \text{ metres}$$

$$\text{The speed of the man} = 240/12 = 20 \text{ m/s}$$

$$\text{The speed of the another thief} = 15 * 80/100 = 12 \text{ m/s}$$

$$\text{Relative speed of the man with respect to another thief} = 20 - 12 = 8 \text{ m/s}$$

$$\text{Time taken} = 168/8 = 21 \text{ seconds}$$

25. Questions

Answer: A

According to the question,

$$\text{Let, the number of biscuits sold in shop A} = 4x$$

$$\text{The number of chocolates sold in shop A} = 7x$$

$$\text{The number of biscuits sold in shop B} = 4x * 125/100 = 5x$$

$$\text{The number of chocolates sold in shop B} = 7x * 80/100 = 5.6x$$

$$4x + 7x = 440$$

$$x = 40$$

The number of chocolates sold in shop B = $5.6 * 40 = 224$

26. Questions**Answer: B**

$$15.99 + 20.01 - 123.5 = ? / 10$$

$$16 + 20 - 123.5 = ? / 10$$

$$36 - 123.5 = ? / 10$$

$$-87.5 = ? / 10$$

$$? = -875$$

27. Questions**Answer: C**

$$(14.86 * 17.89 + 120.2) / 13.12 = ?$$

$$(15 * 18 + 120) / 13 = ?$$

$$(270 + 120) / 13 = ?$$

$$390 / 13 = ?$$

$$? = 30$$

28. Questions**Answer: B**

$$431.88 / 9.12 + 67.12 * 5.98 = ? * 18.22$$

$$432 / 9 + 67 * 6 = ? * 18$$

$$48 + 402 = ? * 18$$

$$450 = ? * 18$$

$$? = 25$$

29. Questions**Answer: B**

$$(3132.32 / 8.94 + 64.21) = ? + 131.86$$

$$(3132 / 9 + 64) = ? + 132$$

$$(348 + 64) = ? + 132$$

$$412 = ? + 132$$

$$? = 280$$

30. Questions**Answer: D**

$$(163.12 + 246.91) * 8.76 / 82 = ?$$

$$(163 + 247) * 9 / 82 = ?$$

$$? = 410 / 82 * 9$$

$$? = 45$$

31. Questions**Answer: C**

$$(18+3)*3 = 63$$

$$(63+4)*3 = 201$$

$$(201+5)*3 = 618$$

$$(618+6)*3 = 1872$$

32. Questions**Answer: A**

$$19 * 2 = 38$$

$$38 * 2 = 76$$

$$76 * 2 = 152$$

$$152 * 2 = 304$$

33. Questions**Answer: A**

$$31 + 2^2 = 35$$

$$35 - 3^2 = 26$$

$$26 + 4^2 = 42$$

$$42 - 5^2 = 17$$

34. Questions**Answer: A**

$$5 + 1 * 2 = 7$$

$$7 + 2 * 3 = 13$$

$$13 + 3 * 4 = 25$$

$$25 + 4 * 5 = 45$$

35. Questions**Answer: B**

$$32 + 2 = 34$$

$$34 + 3 = 37$$

$$37 + 5 = 42$$

$$42 + 7 = 49$$

36. Questions

Answer: C

$$x^2 + 19x + 34 = 0$$

$$x^2 + 17x + 2x + 34 = 0$$

$$(x+17)(x+2) = 0$$

$$x = -17, -2$$

$$y^2 + 21y + 54 = 0$$

$$y^2 + 3y + 18y + 54 = 0$$

$$(y+18)(y+3) = 0$$

$$y = -18, -3$$

Hence, $x = y$ or relationship cannot be determined

37. Questions

Answer: A

$$x^3 = -125$$

$$x = -5$$

$$y^2 + 17y + 72 = 0$$

$$y^2 + 9y + 8y + 72 = 0$$

$$(y+9)(y+8) = 0$$

$$y = -9, -8$$

Hence, $x > y$

38. Questions

Answer: C

$$x^2 - 5x - 36 = 0$$

$$x^2 + 4x - 9x - 36 = 0$$

$$(x+4)(x-9) = 0$$

$$x = -4, 9$$

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

$$2y^2 + 3y + 8y + 12 = 0$$

$$(y+4)(2y+3) = 0$$

$$y = -4, -1.5$$

Hence, $x = y$ or no relationship cannot be determined

39. Questions

Answer: A

$$x^2 - 22x + 120 = 0$$

$$x^2 - 12x - 10x + 120 = 0$$

$$(x - 12)(x - 10) = 0$$

$$x = 12, 10$$

$$y^2 - 6y - 16 = 0$$

$$y^2 - 8y + 2y - 96 = 0$$

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

$$y = -2, 8$$

Hence, $x > y$

40. Questions

Answer: C

$$2x^2 + 7 = 15x$$

$$2x^2 - 15x + 7 = 0$$

$$2x^2 - x - 14x + 7 = 0$$

$$(x - 7)(2x - 1) = 0$$

$$x = 0.5, 7$$

$$y^2 - 8y + 12 = 0$$

$$y^2 - 6y - 2y + 12 = 0$$

$$(y - 6)(y - 2) = 0$$

$$y = 6, 2$$

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

rohitsankhala04@gmail.com