

Previous Year Exam Questions

Question 1.

Two numbers are in the ratio of 2 : 3 and the difference of their squares is 320. The number are : [1 Mark, Nov. 2006]

- (a) 12, 18
- (b) 16, 24
- (c) 14, 21
- (d) None

Answer:

Tricks : Go by choices (a); (b) & (c) all are in ratio 2:3 But For option

(a) $18^2 - 12^2 \neq 320$

(b) $24^2 - 16^2 = (24+16)(24-16)$

$= 40 \times 8 = 320$

(b) is Correct Answer

Question 2.

If $p : q$ is the sub-duplicate ratio of $p - x^2 : q - x^2$, then x^2 is : [1 Mark, Nov. 2006]

- (a) $\frac{p}{p+q}$
- (b) $\frac{q}{q+p}$
- (c) $\frac{q}{p-p-q}$
- (d) None

Answer:

Detail Method:

$$\frac{p-x^2}{q-x^2} = \frac{p}{q}$$

Squaring on both side; we get

$$\frac{(p-x^2)^2}{(q-x^2)^2} = \frac{p^2}{q^2}$$

$$\text{or } \frac{p^2 - 2px^2 + x^4}{q^2 - 2qx^2 + x^4} = \frac{p^2}{q^2}$$

$$\text{or } \frac{p^2q^2 - 2p^2qx^2 + p^2x^4}{q^2 - 2qx^2 + x^4} = p^2$$

$$\text{or } x^2(p^2 - q^2) = pq(p - q)$$

$$\text{or } x^2(p + q)(p - q) = pq(p - q)$$

(d) is correct

Tricks : Go by choices.

Question 3.

An alloy is to contain copper and zinc in the ratio 9:4. The zinc required to melt with 24 kg of copper is : [1 Mark, Nov. 2006]

- (a) 1023kg

(b) 1013kg

(c) 923kg

(d) 9 kg

Answer:

Let Zinc = x kg

(a) $\therefore 94 = 24x \therefore x = 4 \times 249 = 323$

= 1023kg

\therefore (a) is correct

Question 4.

Two numbers are in the ratio 7: 8. If 3 is added to each of them, their ratio becomes 8 : 9. The numbers are: [1 Mark, Feb. 2007]

(a) 14,16

(b) 24,27

(c) 21,24

(d) 16,18

Answer:

Tricks : Go by choices

(b) and (d) are not in the ratio 7 : 8 So (b) & (d) are not answer For (a) it is added then

$14+3 \neq 10+3=17 \neq 16+3=19 \neq 8 \times 9$

(a) is not answer

(c) is answer Detail Method:

Let x is common in the ratio

\therefore Numbers are 7x & 8x

Now $7x+3 \neq 8x+3=89$

or $64x + 24 = 63x + 27$

or $64x - 63x = 27-24$

or $x = 3$

1st number = $7x = 7 \times 3 = 21$

2nd number = $8x = 8 \times 3 = 24$

(c) is correct

Ratio and Proportion – CA Foundation Maths Study Material

Question 5.

A box contains ₹ 56 in the form of coins of one rupee, 50 paise and 25 paise. The number of 50 paise coin is double the number of 25 paise coins and four times the numbers of one rupee coins. The numbers of 50 paise coins in the box is : [1 Mark, Feb. 2007]

- (a) 64
- (b) 32
- (c) 16
- (d) 14

Answer:

Tricks : Go by choices

No. of 25 paise coins = 12 No. of 50 Paise

No. of Rupee coins = 14 No. of 50 Paise Coins

For (a) No. of coins of ₹ 1; 50 Paise & 25 Paise

64; 64; 64

Total Value = $16 \times 1 + 64 \times 0.50 + 32 \times 0.25$

= ₹ 16 + 32 + 8 = ₹ 56

Which is equal to given value (a) is Correct

Detail Method

Let No. of 50 Paise coins = x

∴ No. of ₹ 1 coins = x/4

and No. of 25 Paise coins = x/2

∴ Total Value =

$x/4 \times 1 + x \times 0.50 + x/2 \times 0.25 = 56$

or $0.25x + 0.50x + 0.125x$

or $0.875x = 56$

or $x = 56/0.875 = 64$

∴ (a) is correct

Question 6.

Eight people are planning to share equally the cost of a rental car. If one person withdraws from the arrangement and the others share equally entire cost of the car, then the share of each of the remaining persons increased by : [1 Mark, May 2007]

- (a) 1/9
- (b) 1/8
- (c) 1/7
- (d) 7/8

Answer:

Tricks : Per Person share increase = 1/8 of total share

Question 7.

A bag contains ₹ 187 in the form of 1 rupee, 50 paise and 10 paise coins in the ratio 3:4:5. Find the

number of each type of coins: [1 Mark, May 2007]

- (a) 102, 136, 170
- (b) 136, 102, 170
- (c) 170, 102, 136
- (d) None

Answer:

Tricks I: Go by choices

For (a) Coins are in the ratio 3:4:5

$$\therefore 1023=1364=1705 = 34$$

It satisfies 1st condition

$$\text{Now } 102 \times 1 + 136 \times 0.50 + 170 \times 0.10$$

$$= 102 + 68 + 17 = ₹ 187$$

\therefore (a) is correct

Tricks II

$$\text{Common factor} = 1873 \times 1 + 4 \times 0.50 + 5 \times 0.10$$

$$= 1875.50 = 34$$

$$\therefore \text{No. of 1 Rupee coins} = 3 \times 34 = 102$$

$$\text{No. of 50 Paise coins} = 4 \times 34 = 136$$

$$\text{No. of 10 paise coins} = 5 \times 34 = 170 \text{ (a) is correct}$$

Detail Method

Let x is common in the ratio

No. of 1 Rupee ; 50 Paise and 10 Paise Coins are 3x ; 4x and 5x

$$\therefore 3x \times 1 + 4x \times 0.50 + 5x \times 0.10 = 187$$

$$\text{or } 5.50x = 187$$

$$\therefore x = 1875.50 = 34$$

$$\therefore \text{No. of 1 Rupee coins} = 3x = 3 \times 34 = 102$$

$$\text{No. of 50 Paise coins} = 4x = 4 \times 34 = 136$$

$$\text{No. of 10 Paise coins} = 5x = 5 \times 34 = 170$$

\therefore (a) is correct

Question 8.

Ratio of earnings of A and B is 4 : 7. If the earnings of A increase by 50% and those of B decrease by 25%, the new ratio of their earning becomes 8 : 7. What is A's earning ?

- (a) ₹ 21,000
- (b) ₹ 26,000
- (c) ₹ 28,000
- (d) Data inadequate [1 Mark, Aug. 2007]

Answer:

Detailed Method Let x is common in the ratio

\therefore A's and B's present earnings are $4x$ and $7x$ respectively

From question $4x+4x \times 0.50 - 7x \times 0.25 = 87$

or $6x - 5.25x = 87$

x cannot be found.

Data is inadequate

\therefore (d) is Correct

Question 9.

P, Q and R are three cities. The ratio of average temperature between P and Q is 11 : 12 and that of between P and R is 9: 8. The ratio between the average temperature of Q and R is : [1 Mark, Aug. 2007]

(a) 22: 27

(b) 27: 22

(c) 32: 33

(d) None

Answer:

\therefore P: Q = 11 : 12 \therefore Q : P = 12 : 11

Q: P: R = 12: 11: 9

Q: R = 27: 22

(b) is Correct

Question 10.

₹ 407 are to be divided among A, B and C so that their shares are in the ratio 14:15:16

The respective shares of A, B, C are: [1 Mark, Nov. 2007]

(a) ₹ 165, ₹ 132, ₹ 110

(b) ₹ 165, ₹ 110, ₹ 132

(c) ₹ 132, ₹ 110, ₹ 165

(d) ₹ 110, ₹ 132, ₹ 165.

Answer:

A:B:C = 14:15:16 \times LCM of denominators = 60

= 15 : 12 : 10

\therefore A's share = $\frac{407}{15+12+10} \times 15 = \text{Rs. } 165$

B's share = $\frac{407}{37} \times 12 = \text{Rs. } 132$

C's share = $\frac{407}{37} \times 10 = \text{Rs. } 110$

(a) is Correct

Tricks : Go by Choices.

Question 11.

The incomes of A and B are in the ratio 3 : 2 and their expenditures in the ratio 5 : 3. If each saves ₹ 1,500, then B's income is : [1 Mark, Nov. 2007]

- (a) ₹ 6,000
- (b) ₹ 4,500
- (c) ₹ 3,000
- (d) ₹ 7,500

Answer:

Detail Method Let x is common in the ratio.

A's income = 3x

B's income = 2x

$\therefore 3x - 1500 = 2x - 1500 = 53$

or $10x - 7500 = 9x - 4500$

or $10x - 9x = 7500 - 4500$

or $x = 3000$

B's income = $2x = 2 \times 3000$

= ₹ 6000.

(a) is Correct Tricks : Go by choices For (a)

AB Expenditure = $6000 \times 3 - 1500 = 6000 - 1500 = 7500$
 $4500 = 53$

(a) is Correct

Question 12.

In 40 litres mixture of glycerine and water, the ratio of glycerine and water is 3:1. The quantity of water added in the mixture in order to make this ratio 2:1 is : [1 Mark, Feb. 2008]

- (a) 15 litres
- (b) 10 litres
- (c) 8 litres
- (d) 5 litres

Answer:

Glycerine = $40 \times \frac{3}{3+1} = 30$ litres.

Water = $40 \times \frac{1}{3+1} = 10$ litres

Let x litres of water is added to the mixture

Then $\frac{30}{10+x} = \frac{2}{1}$

or, $2x + 20 = 30$

or $x = 5$

\therefore (d) is Correct

Tricks : Go by Choices

Question 13.

The third proportional between $(a^2 - b^2)$ and $(a + b)^2$ is : [1 Mark, Feb. 2008]

- (a) $a+ba-b$
- (b) $a-ba+b$
- (c) $(a-b)2a+b$
- (d) $(a+b)3a-b$

Answer:

3rd Proportion = (Mean prop.)² Ist Proportional
 $= \{(a+b)^2\}^2 a^2 - b^2 = (a+b)^4 3(a+b)(a+b) = (a+b)3a-b$

(d) is Correct

Question 14.

In what ratio should tea worth ₹ 10 per kg. be mixed with tea worth ₹ 14 per kg., so that the average price of the mixture may be ₹ 11 per kg.? [1 Mark, June 2008]

- (a) 2 : 1
- (b) 3 : 1
- (c) 3 : 2
- (d) 4 : 3

Answer:

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∴ (b) is Correct

Question 15.

The ages of two persons are in the ratio 5:7. Eighteen years ago their ages were in the ratio of 8:13, their present ages (in years) are : [1 Mark, June 2008]

- (a) 50; 70
- (b) 70,50
- (c) 40,56
- (d) None

Answer:

Tricks : Go by choices (a) & (c) are in the ratio 5 : 7 not (b)

For (a) 18 year ago

So, (a) is Correct

Question 16.

If A, B and C started a business by investing ₹ 1,26,000, ₹ 84,000 and ₹ 2,10,000. If at the end of the year profit is ₹ 2,42,000 then the share of each is : [1 Mark, Dec. 2008]

- (a) ₹ 72,600; ₹ 48,400 ; ₹ 1,21,000

(b) ₹ 48,400 ; ₹ 1,21,000 ; ₹ 72,600

(c) ₹ 72,000 ; ₹ 49,000 ; ₹ 1,21,000

(d) ₹ 48,000 ; ₹ 1,21,400 ; ₹ 72,600

Answer:

Investment ratio is

$$A : B : C = 126,000 : 84,000 : 2,10,000 \div 14,000$$

$$= 9 : 6 : 15 \div 3$$

$$= 3 : 2 : 5$$

$$A's \text{ share} = ₹ 242,000 \frac{3}{3+2+5} \times 3 = ₹ 72,600$$

$$B's \text{ share} = 242,000 \frac{2}{3+2+5} \times 2 = ₹ 48,400$$

$$C's \text{ share} = 242,000 \frac{5}{3+2+5} \times 5 = ₹ 1,21,000$$

So, (a) is Correct

Question 17.

If $pq = -23$ then the value of $2p+q$ $2p-q$ is: [1 Mark, June 2009]

(a) 1

(b) -17

(c) 17

(d) 7

Answer:

$$\because pq = -23$$

Tricks

$$2p+q \quad 2p-q = 2(-2)+3 \quad 2(-2)-3 = -4+3 \quad -4-3 = -1-7 = 17$$

(c) is correct

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Question 18.

Fourth proportional to x , $2x$, $(x+1)$ is :

(a) $x+2$

(b) $(x+2)$

(c) $(2x+2)$

(d) $(2x-2)$

Answer:

Let Fourth Proportional is K .

$$\therefore x \cdot 2x = (x+1)K$$

$$\text{or } k \cdot x = 2x(x+1)$$

$$\text{or } k = 2(x + 1) = 2x + 2$$

(c) is correct

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Question 19.

What must be added to each term of the ratio 49 : 68 so that it becomes 3 : 4? [1 Mark, June 2010]

(a) 3

(b) 5

(c) 8

(d) 9

Answer:

Detail Method:

Let x is added to each term

$$\text{Then } 49+x : 68+x = 3:4$$

$$\text{or } 196 + 4x = 204 + 3x$$

$$\text{or } 4x - 3x = 204 - 196$$

$$\text{or } x = 8$$

(c) is Correct

Tricks : Go by Choices

1st Find $3/4 = 0.75$ (By Calculator)

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Question 20.

The students of two classes are in the ratios 5 : 7, if 10 students left from each class, the remaining students are in the ratio of 4 : 6, then the number of students in each class was : [1 Mark, June 2010]

(a) 30, 40

(b) 25, 24

(c) 40, 60

(d) 50, 70

Answer:

Tricks : Go by choices:

(a); (b) and (c) are not in the ratio 5 : 7

∴ (d) is Correct.

Question 21.

If A: B= 2: 5, then (10A + 3B) : (5A + 2B) is equal to: [1 Mark, Dec. 2010]

(a) 7: 4

(b) 7: 3

(c) 6: 5

(d) 7: 9

Answer:

It A : B = 2 : 5 Then

$$10A+3B=5A+2B=10\times 2+3\times 5=20+15=35$$

$$= 7: 4$$

(a) is Correct

Question 22.

In a film shooting, A and B received money in a certain ratio and B and C also received the money in the same ratio. If A gets ₹ 1,60,000 and C gets ₹ 2,50,000. Find the amount received by B ? [1 Mark, June 2011]

(a) ₹ 2,00,000

(b) ₹ 2,50,000

(c) ₹ 1,00,000

(d) ₹ 1,50,000

Answer:

Detail Method

$$A : B = B : C$$

$$\text{So, } B^2 = AC ;$$

$$\text{so, } B = \sqrt{AC} = \sqrt{1,60,000 \times 2,50,000}$$

$$= 400 \times 500 = 2,00,000$$

Question 23.

The ratio compounded of 4:5 and sub-duplicate of " a " : 9 is 8:15. Then value of "a" is: [1 Mark, Dec. 2011]

(a) 2

(b) 3

(c) 4

(d) 5

Answer:

$$(c) 4 \times 5 \times a \sqrt{9} = 8 \times 15$$

$$\text{or } 45 \times a \sqrt{3} = 815$$

$$\therefore \sqrt{a} = 2 \Rightarrow a = 4$$

(c) is Correct

Question 24.

If X varies inversely as square of Y and given that Y=2 for X = 1, then the value of X for Y =6 will be: [1 Mark, Dec. 2011]

- (a) 3
- (b) 9
- (c) 1/3
- (d) 6

Answer:

(d) is Correct

$x \propto \frac{1}{y^2} \Rightarrow x = \frac{k}{y^2}$ or $x = ky^2$, where k = proportional constant

where k = proportional constant

When x = 1 Then y = 2

$$1 = \frac{k}{2^2} \Rightarrow k = 4 \therefore x = \frac{4}{y^2}$$

When y = 6, Then x = $\frac{4}{6^2} = \frac{1}{9}$

$$x = \frac{1}{9}$$

Question 25.

Which of the numbers are not in proportion ?

- (a) 6, 8, 5, 7
- (b) 7, 14, 6, 12
- (c) 18, 27, 12, 18
- (d) 8, 6, 12, 9

Answer:

(a) Go by choices

For (a) $6 \cdot 8 = 48 \neq 5 \cdot 7 = 35$

(a) is not in proportion

Question 26.

Find two numbers such that mean proportional between them is 18 and third proportional between them is 144: [1 Mark, Dec. 2012]

- (a) 9 ; 36
- (b) 8 ; 32
- (c) 7 ; 28
- (d) 6 ; 14

Answer:

(a) is correct Tricks : Go by choices

For (a) Mean Proportional of 9 and 36

$$= \sqrt{9 \times 36} = 18$$

It satisfies 1st condition.

If 144 is its 3rd condition.

$$362 = 9 \times 144$$

It also satisfies the 2nd Condition.

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Question 27.

Triplicate ratio of 4 : 5 is: [1 Mark, June 2013]

- (a) 125 : 64
- (b) 16 : 25
- (c) 64 : 125
- (d) 120 : 46

Answer:

(c) Triplicate ratio of 4:5 = $4^3 : 5^3 = 64 : 125$

Question 28.

The mean proportion between 24 and 54 is _____. [1 Mark, June 2013]

- (a) 33
- (b) 34
- (c) 35
- (d) 36

Answer:

(d) Mean – Proportion = $\sqrt{24 \times 54} = 36$

Question 29.

The ratio of numbers is 1:2:3 and sum of their squares is 504 then the numbers are: [1 Mark, Dec. 2013]

- (a) 6, 12, 18
- (b) 3, 6, 9
- (c) 4, 8, 12
- (d) 5, 10, 15

Answer:

(a) is correct

Tricks : Go by choices

Tricks : See Quicker BMLRS

Question 30.

If P is 25% less than Q and R is 20% higher than Q the Ratio of R and P: [1 Mark, Dec. 2013]

- (a) 5:8

(b) 8:5

(c) 5:3

(d) 3:5

Answer:

(b) is correct

Let Q = 100, So, P = 100 - 025 = 75

&R = 100 + 20 = 120

RP=12075=85

Question 31.

A person has assets worth ₹ 1,48,200. He wish to divide it amongst his wife, son and daughter in the ratio 3:2:1 respectively. From this assets the share of his son will be: [1 Mark, June 2014]

(a) ₹ 74,100

(b) ₹ 37,050

(c) ₹ 49,400

(d) ₹ 24, 700

Answer:

(c) is correct

Share of son = $\frac{2}{3+2+1} \times 1,48,200$

= ₹ 49,400

Question 32.

If $x : y = 2 : 3$ then $(5x+2y) : (3x -y) =$ [1 Mark, June 2014]

(a) 19 : 3

(b) 16: 3

(c) 7 : 2

(d) 7: 3

Answer:

(b) is correct

$5x+2y3x-y=5 \times 2+2 \times 33 \times 2-3=163$

Question 33.

The first, second and third month salaries of a person are in the ratio 2:4:5. The difference between the product of the salaries of first 2 months & last 2 months is ₹ 4,80,00,000. Find the salary of the second month [1 Mark, Dec. 2014]

(a) ₹ 4,000

(b) ₹ 6,000

(c) ₹ 12,000

(d) ₹ 8,000

Answer:

(d) is correct

Let x is common in the ratio.

1st, 2nd and 3rd month salaries of a person = $2x$; $4x$; $5x$

From Qts.

$$4x \times 5x - 2x \times 4x = 4,80,00,000.$$

$$\text{or, } 12x^2 = 4,80,00,000.$$

$$\text{or, } x^2 = 4000000$$

$$x = 2000.$$

$$\text{2nd month salary} = 4x = 4 \times 2000$$

$$= ₹ 8000$$

Question 34.

$(2p^2 - q^2) = 7pq$, where p, q are positive then $p : q$. [1 Mark, June 2015]

(a) 5:6

(b) 5:7

(c) 3:5

(d) 3:7

Answer:

(a) is correct $15(2p^2 - q^2) = 7pq$

Tricks : Go by choices

For (a) put $p = 5$; $q = 6$ we get

$$15[2 \times 5^2 - 6^2] = 3 \times 5 \times 6$$

$$\text{or } 15 \times 14 = 210$$

$$\text{or } 210 = 210$$

Ratio and Proportion – CA Foundation Maths Study Material

Question 35.

If one type of rice of cost ₹ 13.84 is mixed with another type of rice of cost ₹ 15.54, the mixture is sold at ₹ 17.60 with a profit of 14.6% on selling price then in which proportion the two types of rice mixed ? [1 Mark, June 2015]

(a) 3:7

(b) 5:7

(c) 7:9

(d) 9:1

Answer:

$$\text{Cost of mixture per kg} = 17.60 - 14.6\% = 15.0304 = 15.03 \text{ (approx.)}$$

By rules of Alligation

Ratio and Proportion – CA Foundation Maths Study Material 3

$$51: 119 = 3: 7$$

Go by choices

(a) is correct (approx)

Question 36.

Find the ratio of third proportional of 12 ; 30 and mean proportional of 9; 25 : [1 Mark, Dec. 2015]

(a) 7: 2

(b) 5 : 1

(c) 9 : 4

(d) None of these

Answer:

$$3\text{rd proportional} = \frac{30 \times 12}{12} = 75$$

$$\text{Mean Proportional} = \sqrt{9 \times 25} = 15$$

$$\text{Ratio} = \frac{75}{15} = 5:1$$

(b) is correct

Question 37.

What must be added to each of the numbers 10, 18, 22, 38 to make them proportional: [1 Mark, Dec. 2015]

(a) 5

(b) 2

(c) 3

(d) 9

Answer:

(b) is correct

let x be added.

$$\therefore 10+x : 18+x = 22+x : 38+x$$

Tricks: Go by choices.

$\therefore x = 2$ satisfies it.

Question 38.

x, y, z together starts a business, if x invests 3 times as much as y invests and y invests two third of what z invests, then the ratio of capitals of x, y, z is: [1 Mark, June 2016]

(a) 3 : 9 : 2

(b) 6: 3: 2

(c) 3 : 6 : 2

(d) 6: 2: 3

Answer:(d)

Tricks: Go by choices

$$6 = 3 \times 2 \text{ and } 2 = 3 \times 23$$

Question 39.

A bag contains 23 number of coins in the form of 1 rupee, 2 rupee and 5 rupee coins. The total sum of the coins is ₹ 43. The ratio between 1 rupee and 2 rupees coins is 3 : 2. Then the number of 1 rupee coins is: [1 Mark, Dec. 2016]

(a) 12

(b) 8

(c) 10

(d) 16

Answer:

(a)

Tricks : Go by choices

Let option (a) is correct.

Let x is common in the ratio.

$$\text{So, ₹ 1 coins} = 3x = 12 ; \text{ So, } x = 4$$

$$\text{No. of ₹ 2 coins} = 2 \times 4 = 8$$

$$\text{Hence no. of coins of ₹ 5 coins} = 23 - 12 - 8 = 3$$

$$\text{Total money} = 12 \times 1 + 8 \times 2 + 3 \times 5 = ₹ 43$$

Satisfied. So (a) is correct.

Question 40.

If $a : b = 2 : 3$, $b : c = 4 : 5$, $c : d = 6 : 7$ then $a : d$ is: [1 Mark, June 2017]

(a) 24 : 35

(b) 8 : 15

(c) 16 : 35

(d) 7 : 15

Answer:

Option (c) is correct.

Multiply all ratios.

$$= 2 \times 3 \times 4 \times 5 \times 6 \times 7 = 1635$$

Question 41.

The ratio of the number of five rupee coins to number of ten rupee coins is 8: 15. If the total value of five rupee coins is 360, then the no. of ten rupee coins is _____. [1 Mark, Dec. 2017]

Answer:

Option (d) is correct.

$$\text{Total No. of ₹ 5 coins} = 360/5 = 72$$

Let x is common in the ratio.

So, ₹ 5 coins = $8x = 72$; So, $x = 9$

No. of ₹ 10 coins = $15 \times 9 = 135$

Question 42.

If 12,13,15,1x are in proportion then $x =$. [1 Mark, Dec. 2017]

(a) 152

(b) 315

(c) 215

(d) 115

Answer:

Option (a) is correct.

Product of middle two terms = Product of extremes

So, $12x=115$; $x = 15/2$

Question 43.

If $(a + b) : (b + c) : (c + a) = 7 : 8 : 9$ and $a + b + c = 18$ then $a : b : c =$. [1 Mark, June 2018]

(a) 5 : 4 : 3

(b) 3 : 4 : 5

(c) 4 : 3 : 5

(d) 4 : 5 : 3

Answer:

(c) 4 : 3 : 5 is correct

Tricks: Go by choices.

(c) Let $a : b : c = 4 : 3 : 5$

It is in ratio. So, it should must satisfy given ratio $(a + b) : (b + c) : (c + a) = 7 : 8 : 9$

i.e. $(4 + 3) : (3 + 5) : (5 + 4) = 7 : 8 : 9$ (True) Avoid 2nd condition.

In detail it will take too much time.

Ratio and Proportion – CA Foundation Maths Study Material

Question 44.

If $p : q$ is the sub-duplicate ratio of $p - x^2 : q - x^2$, then x^2 is : [1 Mark, May 2018]

(a) $pp+q$

(b) $qp+q$

(c) $qpp-q$

(d) None

Answer:

Question 45.

The mean proportional between 24 and 54 is : [1 Mark, May 2018]

- (a) 33
- (b) 34
- (c) 35
- (d) 36

Solution:

Formula

Mean Proportion of a & b = \sqrt{ab}

$$(d) = \sqrt{24 \times 54} = 36$$

Question 46.

$3x^2 - 25x + 6$ is the duplicate ratio of 23 then find the value of x : [1 Mark, Nov. 2018]

- (a) 6
- (b) 2
- (c) 5
- (d) 9

Answer:

(a)

$$\text{Given } 3x^2 - 25x + 6 = (23)^2 = 49$$

Tricks : Go by choices

for option (a) putting $x = 6$ in LHS; we get

$$3 \times 6^2 - 25 \times 6 + 6 = 49$$

\therefore (a) is correct.

Question 47.

If $x : y : z = 7 : 4 : 11$ then is: [1 Mark, Nov. 2018]

- (a) 2
- (b) 3
- (c) 4
- (d) 5

Answer:

(a)

$$x + y + z = 7 + 4 + 11 = 22$$

Question 48.

If the ratio of two numbers is 7 : 11. If 7 is added to each number then the new ratio will be 2 : 3 then the numbers are. [1 Mark, June 2019]

(a) 49,77

(b) 42,45

(c) 43,42

(d) 39,40

Answer:

Tricks:- GBC (Go by Choices)

(a)

$$49 \div 7 = 7$$

$$77 \div 11 = 7 \text{ both must be equal.}$$

Here it is correct

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