

Ratio & Proportion

Questions & Solution

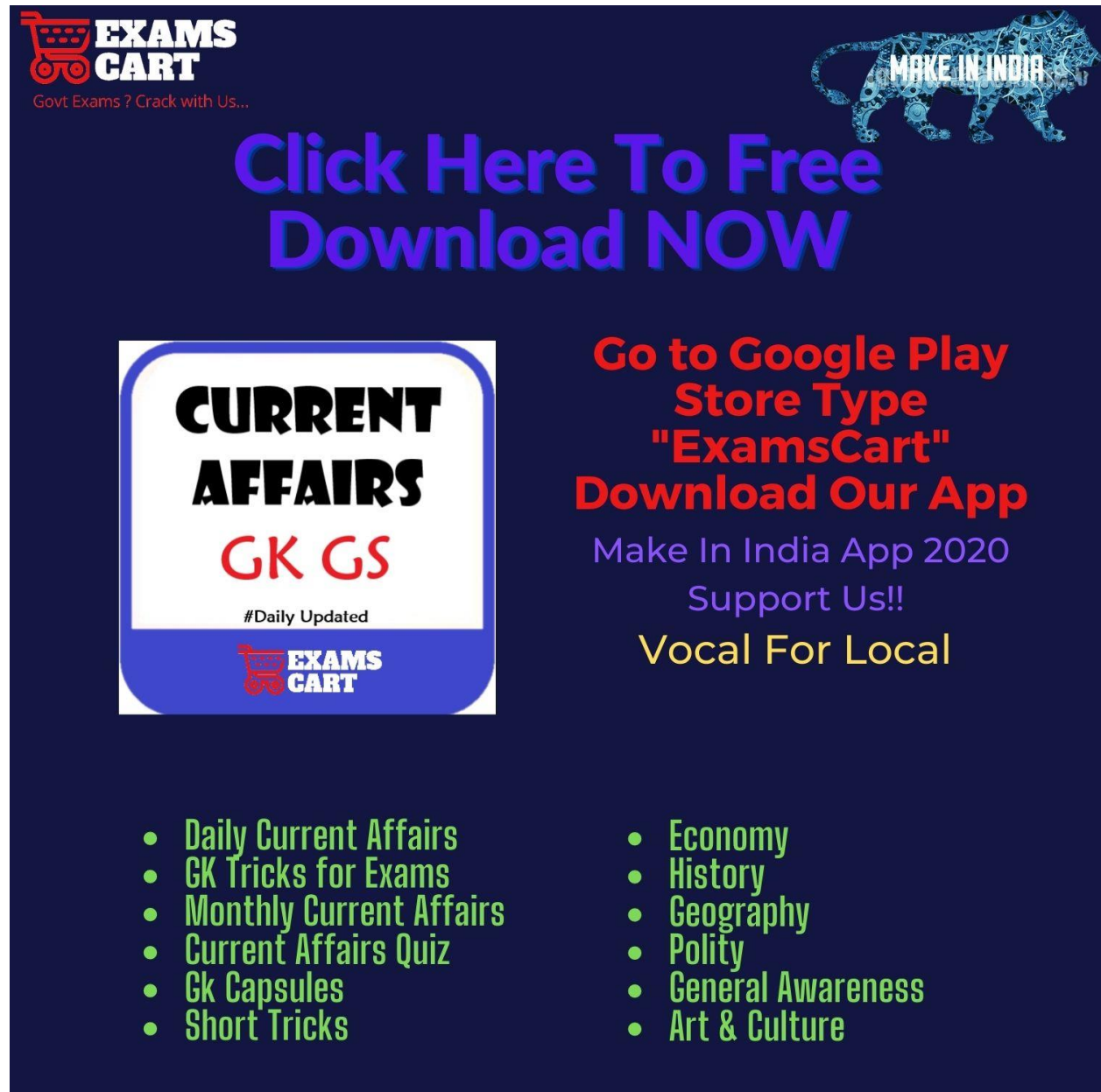
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Ratio & Proportion Questions with solution

An amount of money is to be divided between P, Q and R in the ratio of 3:7:12. If the difference between the shares of P and Q is Rs.X, and the difference between Q and R's share is Rs.3000. Find the total amount of money?

- A.11000
- B.12400
- C.13200
- D.14300
- E.None of these

Answer & Explanation

Answer – C.13200

Explanation :

$$12a-7a = 3000$$

$$5a = 3000$$

$$a = 600$$

$$7a-4a = x$$

$$3a = x$$

$$x = 1800$$

$$22*600 = 13200$$

• If a certain amount X is divided among A, B, C in such a way that A gets $\frac{2}{3}$ of what B gets and B gets $\frac{1}{3}$ of what C gets, which of the following is true

A.C's Share = 1053 and X = 1666

B.A's Share = 238 and X = 1638

C.B's Share = 234 and X = 1666

D.C's Share = 1053 and X = 1638

E.A's Share = 351 and X = 1638

Answer & Explanation

Answer – D.C's Share = 1053 and X = 1638

Explanation :

$$A = \frac{2}{3} B; B = \frac{1}{3} C;$$

$$A:B = 2:3; B:C = 1:3;$$

$$A:B:C = 2:3:9$$

$$C = \frac{9}{14} * 1638 = 1053$$

• Seats for Mathematics, Science and arts in a school are in the ratio 5:7:8. There is a proposal to increase these seats by X%, Y% and Z% respectively. And the ratio of increased seats is 2:3:4, which of the following is true?

A.X = 50; Z = 40

B.Y = 40; Z = 50

C.X = 40; Z = 75

D.X = 50; Z = 40

E.Y = 50; X = 75

Answer & Explanation

Answer – C.X = 40; Z = 75

Explanation :

Number of increased seats are (140% of 5x), (150% of 7x) and (175% of 8x)

i.e., $(140/100 * 5x)$, $(150/100 * 7x)$ and $(175/100 * 8x)$

i.e., 7x, 21x/2 and 14x

Required ratio = 7x:21x/2:14x

= 14x : 21x : 28x = 2:3:4

• **An amount of money is to be distributed among P, Q and R in the ratio of 7:4:5 respectively. If the total share of P and R is 4 times the share of Q, what is definitely Q's share?**

A.2000

B.4000

C.6000

D.Data inadequate

E.None of these

Answer & Explanation

Answer – **D.Data inadequate**

Explanation :

Total sum not given

• **Two candles of same height are lighted at the same time. The first is consumed in 3 hours and second in 2 hours. Assuming that each candles burns at a constant rate, in how many hours after being lighted, the ratio between the first and second candles becomes 2:1?**

A.2 hour

B.2.5 hour

C.4 hour

D.4.5 hour

E.None of these

Answer & Explanation

Answer – **D.4.5 hour**

Explanation :

Height of both candles are same i.e. h

First one takes 6 hours to burn completely, so in one hour = $h/3$

Similarly second one will burn in one hour = $h/2$

Let after t time, ratio between their height is 2:1

so, remaining height of first candle = $h - t*(h/3)$

similarly for second candle = $h - t*(h/2)$

ratio given 2:1,

$h - t*(h/3) / h - t*(h/2) = 2/1$

Solving we get $t = 9/2 = 4.5$

• **If A and B together have a certain amount X and if 4/15 of A's amount is equal to 2/5 of B's amount, which of the following is true?**

A.A = 1767; X = 2675

B.B = 1070; X = 2895

C.A = 1767; X = 2945

D.B = 1158; X = 2585

E.A = 1605; X = 2945

Answer & Explanation

Answer – C.A = 1767; X = 2945

Explanation :

$$\frac{4}{15} * A = \frac{2}{5} * B$$

$$A = \frac{2}{3} B;$$

$$A:B = 3:2;$$

$$A = \frac{3}{5} * 2945 = 1767$$

• A sum of Rs.4880 was divided among boys and girls in such a way that each boy gets Rs.44.50 and each girl get Rs. 55.25. If the total number of girls and boys is 100, find the number of girls?

A.60

B.50

C.40

D.30

E.None of these

Answer & Explanation

Answer – C.40

Explanation :

$$x+y=100 \text{ ————— (i)}$$

$$44.50x + 55.25y = 4880 \text{ ————— (ii)}$$

Solving (i) and (ii) Y = 40

• The income of Vinay and Prakash are in the ratio of 4:5 and their expenditure is in the ratio of 2:3. If each of them saves 5000, then find their income.

A.11000, 8550

B.12000, 7750

C.15000, 8750

D.13000, 9780

E.None of these

Answer & Explanation

Answer – C.15000, 8750

Explanation :

$$4x - 2y = 5000 \text{ and } 5x - 3y = 5000.$$

X = 8750, so income = 8750 and 15000

• If the ratio of the first to second is 2:3 and that of the second to the third is 5: 8, then which of the following is true,

A.Sum = 98; A = 48

B.Sum = 147; B = 30

C.Sum = 147; C = 45

D.Sum = 98; B = 30

E.Sum = 98; C = 72

Answer & Explanation

Answer – D.Sum = 98; B = 30

Explanation :

$$A:B:C = 10:15:24$$

$$\text{If sum} = 98, B = \frac{15}{49} * 98 = 30$$

• A bag contains 25p coins, 50p coins and 1 rupee coins whose values are in the ratio of 8:4:2.If the total values of coins isX and the total amount in rupees is Y,thenwhich of the

following is true

- A.X = 840; Y = 260
- B.X = 966; Y = 345
- C.X = 840; Y = 280
- D.X = 740; Y = 260
- E.None of these

Answer & Explanation

Answer – **C.X = 840; Y = 280**

Explanation :

Value is given in the ratio 8:4:2.

$$(8x/0.25) + (4x/0.5) + (2x/1) = 840.$$

$$X = 20. \text{ Total amount, } Y = 14 * 20 = 280$$

•

In a school the number of boys and girls are in the ratio of 4:7. If the number of boys are increased by 25% and the number of girls are increased by 15%. What will be the new ratio of number of boys to that of girls?

- a) 100:131
- b) 100:151
- c) 100:161
- d) 100:181
- e) None of these

Answer & Explanation

Answer – **c) 100:161**

Explanation :

Boys = 4x and girls = 7x

$$\text{Ratio} = 4x * 125/100 : 7x * 115/100 = 100:161$$

• **When 40% percent of a number is added to another number the second number increases to its 20%. What is the ratio between the first and second number?**

- a) 2:1
- b) 1:2
- c) 2:3
- d) 3:4
- e) None of these

Answer & Explanation

Answer – **b) 1:2**

Explanation :

$$(40/100)*a + b = (120/100)*b$$

$$a:b = 1:2$$

• **An amount of money is to be distributed among P, Q and R in the ratio of 5:4:7 respectively. If the total share of P and R is 3 times the share of Q, what is definitely Q's share?**

- a) 2000
- b) 4000
- c) 6000
- d) data inadequate
- e) None of these

Answer & Explanation

Answer – d) data inadequate

Explanation :

Total sum not given

• **Two candles of same height are lighted at the same time. The first is consumed in 6 hours and second in 4 hours. Assuming that each candles burns at a constant rate, in how many hours after being lighted, the ratio between the first and second candles becomes 2:1?**

- a) 1 hour
- b) 2 hour
- c) 3 hour
- d) 4 hour
- e) None of these

Answer & Explanation

Answer – c) 3 hour

Explanation :

Let height of both candles is 'h' and let after t times ratio between the height be 2:1

$$h - t \cdot h/6 : h - t \cdot h/4 = 2:1$$

$$t = 3$$

• **An employer reduces the number of his employees in the ratio of 7:4 and increases their wages in the ratio 3:5. State whether his bill of total wages increases or decreases and in what ratio.**

- a) increases 20:21
- b) decreases 21:20
- c) increases 21:22
- d) decreases 22:21
- e) None of these

Answer & Explanation

Answer – b) decreases 21:20

Explanation :

Let initial employees be 7x and then 4x similarly initial wages be 3y and then 5y

so total wage = 21xy initially and then 20xy

so wages decreases and ratio = 21:20

• **A vessel contains milk and water in the ratio of 4:3. If 14 litres of the mixture is drawn and filled with water, the ratio changes to 3:4. How much milk was there in the vessel initially?**

- a) 24
- b) 32
- c) 40
- d) 48
- e) None of these

Answer & Explanation

Answer – b) 32

Explanation :

milk = 4x and water = 3x

$$\text{milk} = 4x - 14 \cdot \frac{4}{7} \text{ and water} = 3x - 14 \cdot \frac{3}{7} + 14$$

$$4x - 8 : 3x + 8 = 3:4$$

$$X = 8, \text{ so milk} = 8 \cdot 4 = 32 \text{ litres}$$

• The ratio of two numbers is 3:4. If 3 is subtracted from both the numbers, the ratio becomes 1:2. Find the sum of the two numbers?

- a) 9
- b) 10.5
- c) 11.5
- d) 12
- e) None of these

Answer & Explanation

Answer – b) 10.5

Explanation :

$$(3x - 3)/(4x - 3) = \frac{1}{2}$$

$$x = 1.5$$

$$\text{sum of the numbers} = 7 * 1.5 = 10.5$$

• The sum of three numbers is 210. If the ratio between the first and second number be 2:3 and that between the second and third be 4:5, then the difference between the first and third number?

- a) 21
- b) 35
- c) 42
- d) 56
- e) None of these

Answer & Explanation

Answer – c) 42

Explanation :

$$a : b = 2 : 3 \text{ and } b : c = 4 : 5$$

$$a : b : c = 8 : 12 : 15$$

$$\text{Difference between first and third number} = \left(\frac{7}{35}\right) * 210 = 42$$

• A bag contains 25p coins, 50p coins and 1 rupee coins whose values are in the ratio of 8:4:2. The total values of coins are 840. Then find the total amount in rupees.

- a) 220
- b) 240
- c) 260
- d) 280
- e) None of these

Answer & Explanation

Answer – d) 280

Explanation :

Value is given in the ratio 8:4:2.

$$(8x/0.25) + (4x/0.5) + (2x/1) = 840.$$

$$X = 20. \text{ Total amount} = 14 * 20 = 280$$

• The income of Neha and Hitesh are in the ratio of 4:5 and their expenditure is in the ratio of 2:3. If each of them saves 2000, then find their income.

- a) 4000, 6000
- b) 4000, 5000
- c) 5000, 4000

- d) 5000, 6000
e) None of these

Answer & Explanation

Answer – b) **4000, 5000**

Explanation :

$$4x - 2y = 2000 \text{ and } 5x - 3y = 2000.$$

$X = 1000$, so income = 4000 and 5000

•

A company reduces his employee in the ratio 14 : 12 and increases their wages in the ratio 16:18, Determine whether the bill of wages increases or not and in what ratio.

- a) Decreases, 28: 27
b) Increases, 27:28
c) Decreases, 29:28
d) Increases, 28:29
e) None of these

Answer & Explanation

Answer – a) **Decreases, 28: 27**

Explanation :

Let initial employee be $14a$ and final employee be $12a$ similarly initial wage is $16b$ and final wage be $18b$

$$\text{Total initial wage} = 14a * 16b = 224ab, \text{ total final wage} = 12a * 18b = 216ab$$

So clearly wages decreases and ratio = $224ab : 216ab = 28:27$

• **A bucket contains liquid A and B in the ratio 4:5. 36 litre of the mixture is taken out and filled with 36 litre of B. Now the ratio changes to 2:5. Find the quantity of liquid B initially.**

- a) 55ltr
b) 56ltr
c) 57ltr
d) 58ltr
e) None of these

Answer & Explanation

Answer – b) **56ltr**

Explanation :

$$\text{Let } A = 4x \text{ and } B = 5x$$

Now, $A = 4x - 36 * \frac{4}{9}$ and $B = 5x - 36 * \frac{5}{9} + 36$ Now, ratio between A and B = 2:5

$$X = 11.2 \text{ now } B = 11.2 * 5 = 56$$

• **Two numbers are in the ratio of 5:6 and if 4 is added to the first number and 4 is subtracted from the second number then the ratio becomes 3:2. Find the difference between two numbers.**

- a) 2.5
b) 3.5
c) 4.5
d) 6.5
e) None of these

Answer & Explanation

Answer – a) **2.5**

Explanation :

$$(5x + 4) / (6x - 4) = 3/2$$

• The income of riya and priya are in the ratio of 4:5 and their expenditure is in the ratio of 2:3. If each of them saves 2000, then find their income.

- a) 4000, 6000
- b) 4000, 5000
- c) 5000, 4000
- d) 5000, 6000
- e) None of these

Answer & Explanation

Answer – b) 4000, 5000

Explanation :

$$4x - 2y = 2000 \text{ and } 5x - 3y = 2000.$$

$$X = 1000, \text{ so income} = 4000 \text{ and } 5000$$

• A 50 litre of mixture contains milk and water in the ratio 2:3. How much milk must be added to the mixture so that it contains milk and water in the proportion of 3:2.

- a) 20
- b) 25
- c) 30
- d) 35
- e) None of these

Answer & Explanation

Answer – b) 25

Explanation :

$$(20 + x)/30 = 3/2$$

• Two alloys contain platinum and gold in the ratio of 1:2 and 1:3 respectively. A third alloy C is formed by mixing alloys one and alloy two in the ratio of 3:4. Find the percentage of gold in the mixture

- a) 79.2/7%
- b) 71.2/7%
- c) 73.2/7%
- d) 71.3/7%
- e) None of these

Answer & Explanation

Answer – d) 71.3/7%

Explanation :

$$\text{Platinum} = 1/3 \text{ and } 1/4$$

$$\text{gold} = 2/3 \text{ and } 3/4$$

Alloy one and two are mixed in the ratio of 3:4, so ratio of platinum and gold in final ratio – 2:5

$$\text{So gold \%} = (5/7) * 100$$

• The sum of three numbers is 980. If the ratio between first and second number is 3:4 and that of second and third is 3:7. Find the difference between first and last number.

- a) 380
- b) 360
- c) 340
- d) 400
- e) None of these

Answer & Explanation

Answer – a) 380

Explanation :

ratio between three numbers – 9:12:28

$49x = 980$, $x = 20$ difference between number = $19 \times 20 = 380$

• **The ratio between number of girls and boys in a school is 5: 6. If 40 percent of the boys and 20 percent of the girls are scholarship holders, what percentage of the students does not get scholarship?**

- a) 68%
- b) 69%
- c) 71%
- d) 80%
- e) None of these

Answer & Explanation

Answer – b) 69%

Explanation :

Girls = $5x$ and boys = $6x$

Girls that don't get scholarship = $5x \times 80/100 = 4x$ and boys that don't get scholarship = $6x \times 60/100 = 3.6x$

Percent students that didn't get scholarship = $(7.6x/11x) \times 100 = 69$ (approx.)

• **A bag contains 25p coins, 50p coins and 1 rupee coins whose values are in the ratio of 8:4:2. The total values of coins are 840. Then find the total amount in rupees.**

- a) 220
- b) 240
- c) 260
- d) 280
- e) None of these

Answer & Explanation

Answer – d) 280

Explanation :

Value is given in the ratio 8:4:2.

$(8x/0.25) + (4x/0.5) + (2x/1) = 840$.

$X = 20$. Total amount = $14 \times 20 = 280$

• **An amount is to be divided between A, B and C in the ratio 2:3:5 respectively. If C gives 200 of his share to B the ratio among A, B and C becomes 3:5:4. What is the total sum?**

- a) 5000
- b) 6000
- c) 7000
- d) 8000
- e) None of these

Answer & Explanation

Answer – b) 6000

Explanation :

$2x$, $3x + 200$, $5x - 200$

$2x/(3x + 200) = 3/5$, we will get $x = 600$, so total amount = $10 \times 600 = 6000$

•

A bag contains 25p coins, 50p coins and 1 rupee coins whose values are in the ratio of 8:4:2.

The total values of coins are 840. Then find the total number of coins

- A.220
- B.240
- C.260
- D.280
- E.None of these

Answer & Explanation

Answer – **D.280**

Explanation :

Value is given in the ratio 8:4:2.

$$(8x/0.25) + (4x/0.5) + (2x/1) = 840.$$

$$X = 20. \text{ Total amount} = 14 * 20 = 280$$

• **Two vessels contains equal quantity of solution contains milk and water in the ratio of 7:2 and 4:5 respectively. Now the solutions are mixed with each other then find the ratio of milk and water in the final solution?**

- A.11:7
- B.11:6
- C.11:5
- D.11:9
- E.None of these

Answer & Explanation

Answer – **A.11:7**

Explanation :

milk = 7/9 and water = 2/9 – in 1st vessel

milk = 4/9 and water = 5/9 – in 2nd vessel

$$(7/9 + 4/9) / (2/9 + 5/9) = 11:7$$

• **Two alloys contain gold and silver in the ratio of 3:7 and 7:3 respectively. In what ratio these alloys must be mixed with each other so that we get a alloy of gold and silver in the ratio of 2:3?**

- A.2:1
- B.3:1
- C.4:3
- D.3:5
- E.None of these

Answer & Explanation

Answer – **B.3:1**

Explanation :

Gold = 3/10 and silver = 7/10 – in 1st vessel

gold = 7/10 and silver = 3/10 – in 2nd vessel

let the alloy mix in K:1, then

$$(3k/10 + 7/10) / (7k/10 + 3/10) = 2/3. \text{ Solve this equation , u will get } K = 3$$

• **The sum of three numbers is 123. If the ratio between first and second numbers is 2:5 and that of between second and third is 3:4, then find the difference between second and the third number.**

- A.12
- B.14
- C.15

D.17

E. None of these

Answer & ExplanationAnswer – **C.15****Explanation :**

a:b = 2:5 and b:c = 3:4 so a:b:c = 6:15:20

41x = 123, X = 3. And 5x = 15

• **If 40 percent of a number is subtracted from the second number then the second number is reduced to its 3/5. Find the ratio between the first number and the second number.**

A.1:3

B.1:2

C.1:1

D.2:3

E. None of these

Answer & ExplanationAnswer – **C.1:1****Explanation :** $[b - (40/100)a] = (3/5)b.$

So we get a = b.

• **The ratio between the number of boys and girls in a school is 4:5. If the number of boys are increased by 30 % and the number of girls increased by 40 %, then what will the new ratio of boys and girls in the school.**

A.13/35

B.26/35

C.26/41

D.23/13

E. None of these

Answer & ExplanationAnswer – **B.26/35****Explanation :**

boys = 4x and girls = 5x.

Required ratio = $[(130/100)*4x] / [(140/100)*5x]$

• **One year ago the ratio between rahul salary and rohit salary is 4:5. The ratio between their individual salary of the last year and current year is 2:3 and 3:5 respectively. If the total current salary of rahul and rohit is 4300. Then find the current salary of rahul.**

A.1200

B.1800

C.1600

D.2000

E. None of these

Answer & ExplanationAnswer – **B.1800****Explanation :**

4x and 5x is the last year salary of rahul and rohit respectively

Rahul last year to rahul current year = 2/3

Rohit last year to rohit current year = 3/5

Current of rahul + current of rohit = 4300

$$(3/2)*4x + (5/3)*5x = 4300.$$

$$X = 300.$$

So rahul current salary = $3/2 * 4 * 300 = 1800$

• **A sum of 12600 is to be distributed between A, B and C. For every rupee A gets, B gets 80p and for every rupee B gets, C get 90 paise. Find the amount get by C.**

A.3200

B.3600

C.4200

D.4600

E.None of these

Answer & Explanation

Answer – **B.3600**

Explanation :

Ratio of money between A and B – 100:80 and that of B and C – 100:90

so the ratio between A : B :C – 100:80:72

so $252x = 12600$, $x = 50$. So C get = $50*72 = 3600$

• **The sum of the squares between three numbers is 5000. The ratio between the first and the second number is 3:4 and that of second and third number is 4:5. Find the difference between first and the third number.**

A.20

B.30

C.40

D.50

E.None of these

Answer & Explanation

Answer – **A.20**

Explanation :

$$a^2 + b^2 + c^2 = 5000$$

$$a:b:c = 3:4:5$$

$$50x^2 = 5000.$$

$$X = 10.$$

$$5x - 3x = 2*10 = 20$$

• **The ratio between two numbers is 7:5. If 5 is subtracted from each of them, the new ratio becomes 3:5. Find the numbers.**

A.7/2, 5/2

B.3/2, 7/2

C.9/2, 7/2

D.11/2, 5/2

E.None of these

Answer & Explanation

Answer – **A.7/2, 5/2**

Explanation :

$$(7x - 5)/(5x - 5) = 3/5$$

$X = 1/2$ so the numbers are $7/2$ and $5/2$

•

Three cars travel same distance with speeds in the ratio 2 : 4 : 7. What is the ratio of the

times taken by them to cover the distance?

- A) 12 : 6 : 7
- B) 14 : 7 : 4
- C) 10 : 5 : 9
- D) 7 : 4 : 14
- E) 14 : 10 : 7

Answer & Explanation

B) 14 : 7 : 4

Explanation:

$$s = d/t$$

Since distance is same, so ratio of times:

$$1/2 : 1/4 : 1/7 = 14 : 7 : 4$$

• **Section A and section B of 7th class in a school contains total 285 students. Which of the following can be a ratio of the ratio of the number of boys and number of girls in the class?**

- A) 6 : 5
- B) 10 : 9
- C) 11 : 9
- D) 13 : 12
- E) Cannot be determined

Answer & Explanation

B) 10 : 9

Explanation:

The number of boys and girls cannot be in decimal values, so the denominator should completely divide number of students (285).

Check each option:

$6+5 = 11$, and 11 does not divide 285 completely.

$10+9 = 19$, and only 19 divides 285 completely among all.

• **180 sweets are divided among friends A, B, C and D in which B and C are brothers also such that sweets divided between A and B are in the ratio 2 : 3, between B and C in the ratio 2 : 5 and between C and D in ratio 3 : 4. What is the number of sweets received by the brothers together?**

- A) 78
- B) 84
- C) 92
- D) 102
- E) 88

Answer & Explanation

B) 84

Explanation:

$$A/B = N1/D1 \quad B/C = N2/D2 \quad C/D = N3/D3$$

$$A : B : C : D = N1*N2*N3 : D1*N2*N3 : D1*D2*N3 : D1*D2*D3$$

$$A/B = 2/3 \quad B/C = 2/5 \quad C/D = 3/4$$

$$A : B : C : D$$

$$2*2*3 : 3*2*3 : 3*5*3 : 3*5*4$$

$$4 : 6 : 15 : 20$$

$$B \text{ and } C \text{ together} = [(6+15)/(4+6+15+20)] * 180$$

- Number of students in 4th and 5th class is in the ratio 6 : 11. 40% in class 4 are girls and 48% in class 5 are girls. What percentage of students in both the classes are boys?

- A) 62.5%
- B) 54.8%
- C) 52.6%
- D) 55.8%
- E) 53.5%

Answer & Explanation

- B) 54.8%**

Explanation:

Total students in both = $6x+11x = 17x$

Boys in class 4 = $(60/100)*6x = 360x/100$

Boys in class 5 = $(52/100)*11x = 572x/100$

So total boys = $360x/100 + 572x/100 = 932x/100 = 9.32x$

% of boys = $[9.32x/17x] * 100$

- Consider two alloys A and B. 50 kg of alloy A is mixed with 70 kg of alloy B. A contains brass and copper in the ratio 3 : 2, and B contains them in the ratio 4 : 3 respectively. What is the ratio of copper to brass in the mixture?

- A) 8 : 5
- B) 7 : 5
- C) 5 : 11
- D) 4 : 9
- E) 5 : 7

Answer & Explanation

- E) 5 : 7**

Explanation:

Brass in A = $3/5 * 50 = 30$ kg, Brass in B = $4/7 * 70 = 40$ kg

Total brass = $30+40 = 70$ kg

So copper in mixture is $(50+70) - 70 = 50$ kg

So copper to brass = 50 : 70

- Ratio of A and B is in the ratio 5 : 8. After 6 years, the ratio of ages of A and B will be in the ratio 17 : 26. Find the present age of B.

- A) 72
- B) 65
- C) 77
- D) 60
- E) None of these

Answer & Explanation

- A) 72**

Explanation:

$A/B = 5/8$, $A+6/B+6 = 17/26$

Solve both, B = 72

- A bag contains 25p, 50p and 1Re coins in the ratio of 2 : 4 : 5 respectively. If the total money in the bag is Rs 75, find the number of 50p coins in the bag.

- A) 45
- B) 50

- C) 25
D) 40
E) None of these

Answer & Explanation**D) 40****Explanation:**

2x, 4x, 5x

$$(25/100)*2x + (50/100)*4x + 1*5x = 75$$

$$x = 10, \text{ so } 50 \text{ p coins} = 4x = 40$$

• **A is directly proportional to B and also directly proportional to C. When B = 6 and C = 2, A = 24. Find the value of A when B = 8 and C = 3.**

- A) 42
B) 40
C) 58
D) 48
E) None of these

Answer & Explanation**D) 48****Explanation:**

A directly proportional B, A directly proportional to C:

$$A = kB, A = kC$$

$$\text{Or } A = kBC$$

When B = 6 and C = 2, A = 24:

$$24 = k*6*2$$

$$k = 2$$

Now when B = 8 and C = 3:

$$A = 2*8*3$$

• **A is directly proportional to B and also inversely proportional to the square of C. When B = 16 and C = 2, A = 36. Find the value of A when B = 32 and C = 4.**

- A) 25
B) 20
C) 18
D) 32
E) None of these

Answer & Explanation**C) 18****Explanation:**

$$A = kB, A = k/C^2$$

$$\text{Or } A = kB/C^2$$

When B = 16 and C = 2, A = 36:

$$36 = k*16/2^2$$

$$k = 9$$

Now when B = 32 and C = 4:

$$A = 9*32/4^2$$

• **A is directly proportional to the inverse of B and also inversely proportional to C. When B = 36 and C = 9, A = 42. Find the value of A when B = 64 and C = 21.**

- A) 24

- B) 40
 C) 32
 D) 48
 E) None of these

Answer & Explanation

A) 24

Explanation:

$$A = k\sqrt{B}, A = k/C$$

$$\text{Or } A = k\sqrt{B/C}$$

When $B = 36$ and $C = 9$, $A = 42$:

$$42 = k\sqrt{36/9}$$

$$k = 63$$

Now when $B = 64$ and $C = 21$:

$$A = 63*\sqrt{64/21}$$

•

Divide Rs.2340 into three parts, such that first part be double that of second part and second part be 1/3 of the third part. Find the Third part amount?

- A.Rs.780
 B.Rs.1170
 C.Rs.750
 D.Rs.390
 E.None of these

Answer & ExplanationAnswer – **B.Rs.1170****Explanation :**

First: Second: Third = 2:1:3

Third part = $3*2340/6 = 1170$

• **The ratio of income of A and B is 2:3. The sum of their expenditure is Rs.8000 and the amount of savings of A is equal to the amount of expenditure of B. What is the their ratio of sum of income to their sum of savings?**

- A.5:3
 B.3:2
 C.4:3
 D.3:1
 E.None of these

Answer & Explanation

Answer -A.5:3

Explanation :

$$2I - E + E = 8000$$

$$I = 4000$$

$$\text{Sum of their Income} = 5*I = 5*4000 = 20,000$$

$$\text{Sum of their Savings} = 20000 - 8000 = 12,000$$

$$20000:12000 = 5:3$$

• **There are 2 containers of equal capacity. The ratio of milk to water in the first container is 4:5 and in the second container is 3:7. If they are mixed up then the ratio of milk to water in the mixture will be**

- A.17:63

- B.65:96
 C.34:75
 D.67:113
 E.None of these

Answer & ExplanationAnswer – **D.67:113****Explanation :**

$$4+5 = 9 \Rightarrow 40:50$$

$$3+7 = 10 \Rightarrow 27:63$$

$$40+27 : 50:63 = 67:113$$

- **There are two numbers. When 25% of the first number is added to the second number, the resultant number is 1.5times th first number.What is the ratio of 1- number to the 2nd number ?**

- A.3:5
 B.5:4
 C.4:5
 D.2:3
 E.None of these

Answer & ExplanationAnswer – **C.4:5****Explanation :**

$$A+25/100 + B = 1.5A$$

$$A/4 + B = 15A/10$$

$$10A+40B/40 =60A/40$$

$$10A+40B = 60A$$

$$50A = 40B$$

$$A/B = 4/5$$

- **A bag contains 10p,25p and Rs50p coins in the ratio of 5:2:1 respectively. If the total money in the bag is Rs.120.Find the number of 25p coins in that bag?**

- A.160
 B.130
 C.110
 D.90
 E.None of these

Answer & ExplanationAnswer – **A.160****Explanation :**

$$10*5 : 25*2 : 50*1 = 50:50:50 = 1:1:1$$

$$120/3 = \text{Rs.}40$$

$$\text{Rs. } 1 = 4$$

$$\text{Rs.}40 = 4*40 = 160 \text{ coins}$$

- **The ratio of Ganesh's age and his mother's age is 5:12.The difference of their ages is 21.The ratio of their ages after 4 years will be**

- A.3:7
 B.6:11
 C.4:7

D.19:40

E.None of these

Answer & Explanation

Answer – **D.19:40**

Explanation :

$$12x - 5x = 21$$

$$7x = 21$$

$$x = 3$$

$$5:12 = 15:36$$

After 4 years = 19:40

• **The ratio of students of three classes is 2:3:4. If 12 students are increased in each classes then their ratio turns into 13:18:23. What was the total number of students in all the three classes originally ?**

A.250

B.215

C.225

D.190

E.None of these

Answer & Explanation

Answer – **C.225**

Explanation :

$$50:75:100$$

15 students increased

$$65:90:115 \Rightarrow 13:18:23$$

$$\text{Total no of students} = 50+75+100 = 225$$

• **Ravi and Govind have money in the ratio 5 : 12 and Govind and Kiran also have money in the same ratio 5 : 12. If Ravi has Rs. 500, Kiran has**

A.Rs.2500

B.Rs.2880

C.Rs.1850

D.Rs.3100

E.None of these

Answer & Explanation

Answer – **B.Rs.2880**

Explanation :

$$\text{Ravi : Kiran} = 5/12 * 5/12 = 25/144$$

$$\text{Kiran} = 144 * 500 / 25 = 2880$$

• **A town with a population of 1000 has provision for 30days, after 10 days 600 more men added, how long will the food last at the same rate ?**

A.12 days

B.14 ½ days

C.12 ½ days

D.15 days

E.None of these

Answer & Explanation

Answer – C.12 ½ days

Explanation :

$$1000 \times 20 / 1600 = 12 \frac{1}{2} \text{ days}$$

• A man spends Rs.2480 to buy lunch box Rs.120 each and bottles at Rs.80 each, What will be the ratio of maximum number of bottles to lunch box are bought ?

A.13:12

B.11:13

C.9:12

D.7:10

E.None of these

Answer & Explanation

Answer – A.13:12

Explanation :

Check the ans using option

$$13 \times 80 + 12 \times 120 = 1040 + 1440 = 2480$$



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