L5 : Ratio_Proportion_Variation

1-Tut : Find the ratio?

Send Feedback

120/180= ?

Options

This problem has only one correct answer

2/3
3/4
4/5
None Of These

Correct Answer : A

2-Tut : Find the value?

Send Feedback

What is the value of 2: 5?

Options

This problem has only one correct answer

0.33
0.4
0.67
None Of These

Correct Answer : B

3-Tut : Value of a

Send Feedback

What is the value of (1+a)/3 if a= 0.5?

Options

This problem has only one correct answer

2/3
1/2
1/6
None Of These

Correct Answer :B

Solution Description

(1+ a)/3= (1+0.5)/3= 1.5/3= ½

4-Tut : Judge it?

Send Feedback

(400+2)/(800+2) is ……than 400/800.

Options

This problem has only one correct answer

greater than
less than
equal to
can't be determined

Correct Answer : A

5-Tut : Judge It Again?

Send Feedback

1/2 # ((1+100)/(2+200)), what should come in place of "#" ?

Options

This problem has only one correct answer

>
<
=
None Of These

Correct Answer : C

6-Tut : What is x, y and z?

Send Feedback

If x: y = 3 : 2 and y: z = 6: 5 then x: y: z =?

Options

This problem has only one correct answer

9: 6 : 4
9: 6: 5
3: 2: 0.5
3: 6: 5

Correct Answer : B

Solution Description

x: y = 3: 2, y: z = 6: 5

x: y: z = (3*6): (2*6): (2*5) = 18: 12: 10 = 9: 6: 5

7-Tut : Find a:c?

Send Feedback

If a: b = 1: 2 & b: c= 3: 4 then a: c = ?

Options

This problem has only one correct answer

3:6
3:4
1:4
3:8

Correct Answer : D

Solution Description

a: b = 1: 2 & b: c= 3: 4 then a: b: c = 1×3:2×3:2×4= 3:6:8

8-Tut : Find x:t?

Send Feedback

If x: y = 1: 2, y: z = 3: 4, z: w= 5: 6, w: t = 7: 8 then x: t = ?

Options

This problem has only one correct answer

1: 8
105: 336
35: 128
None Of These

Correct Answer : C

Solution Description

If x: y = 1: 2, y: z = 3: 4, z: w= 5: 6, w: t = 7: 8

Then x: t = 1×3×5×7:2×4×6×8=105:384=35:128

9-Tut : Denominations

Send Feedback

A boy has a few coins of denominations 50 paise, 25 paise and 10 paise in the ratio 1 : 2 : 3. If the total amount of the coins is Rs. 6.50, the number of 10 paise coins is

Options

This problem has only one correct answer

5
10
15
20

Correct Answer : C

Solution Description

Let the numbers of 50 paise, 25 paise and 10 paise are x, 2x and 3x.

50x+25×2x+10×3x=650

130x=650

x=5

2x=10,3x=15

Number of 10 paise= 15. Hence, option (c) is correct.

10-Tut : Boy And Denominations

Send Feedback

A boy has a few coins of denominations 10 paise, 20 paise and 25 paise in the ratio 10 : 15 : 6. Then, the possible value of the denomination=?

Options

This problem has only one correct answer

5
11
15
20

Correct Answer : B

Solution Description

Let the possible number of coins be 10x, 15x and 6x.

0.1×10x+0.20×15x+0.25×6x=5.5x.

Option (b) is the multiple of 5.5.

Hence, only option (b) is correct.

11-Tut : Divide Among Workers

Send Feedback

Rs.432 is divided amongst three workers A, B and C such that 8 times A's share is equal to 12 times B's share which is equal to 6 times C's share. How much did B get?

Options

This problem has only one correct answer

24
48
192
96

Correct Answer : D

Solution Description

8 times A's share = 12 times B's share = 6 times C's share

8a= 12b= 6c (where a, b and c are shares of A,B and C)

Note that this is not the same as the ratio of their wages being 8:12:6

In this case, find out the L.C.M of 8, 12 and 6 and divide the L.C.M by each of the above numbers to get the ratio of their respective shares.

The L.C.M of 8, 12 and 6 is 24.
Therefore, the ratio A:B:C:: (24/8): (24/12) : (24/6):: 3:2:4;

The sum of the total wages=3x+2x+4x=432 => 9x=432 or x=48.

Hence B gets 2 X 48= Rs. 96

12-Tut : Proportion-1

Send Feedback

If 3: 2 :: x: 26, then x= ?

Options

This problem has only one correct answer

39
13
26
None Of These

Correct Answer : A

Solution Description

3/2=x/26 or x= 39. Hence, option (a) is correct.

13-Tut : Find b?

Send Feedback

If 2: b:: b: 32, then b= ?(It should be positive)

Options

This problem has only one correct answer

8
4
16
2

Correct Answer : A

Solution Description

2/b=b/32 or b^2=64 or b=8. Hence, option (a) is correct.

14-Ass : Value of k?

Send Feedback

If x:y= 1: 3, y:z= 5: k, z:t= 2: 5 and t:x= 3: 4 then what is the value of k?

Options

This problem has only one correct answer

1/2
1/3
2
3

Correct Answer : A

Solution Description

x: y= 1: 3, y: z= 5: k, z: t= 2: 5 so x: t = 2: 3k

2/3k=43

k=1/2

15-Ass : Ratio Of x to y

Send Feedback

If the ratio of x to y is 25 times the ratio of y to x then what is the ratio of x to y?

Options

This problem has only one correct answer

1:5
5:1
25:1
1:25

Correct Answer : B

Solution Description

x/y=25(y/x)

x^2/y^2=25/1=>x/y=5/1

16-Ass : Calculate Value

Send Feedback

If x/y=z/w, then (xy+zw)^2=.....

Options

This problem has only one correct answer

(x^2+z^2)(y^2+w^2)
x^2y^2+z^2w^2
x^2w^2+y^2z^2
(x^2+w^2)(y^2+z^2)

Correct Answer : A

Solution Description

x/y=z/w=k, x=yk and z=wk

(xy+zw)^2=k^2(y^2+w^2)

(x^2+z^2)(y^2+w^2)=k^2(y^2+w^2)^2

Thus , (xy+zw)^2=(x^2+z^2)(y^2+w^2)

17-Ass : Largest part

Send Feedback

Rs. 575 is to be divided into three parts proportional to 1/2 : 2/3 : 3/4 then the largest part is:

Options

This problem has only one correct answer

Rs. 375
Rs. 275
Rs. 225
Rs. 175

Correct Answer : C

Solution Description

1/2:2/3:3/4=6:8:9

The three parts are in ratio of 6: 8: 9.

So the largest part = Rs.575×(9/23)=25×9=Rs. 225

18-Ass : Salaries

Send Feedback

The salaries of Aman, Bimal, Charan are in the ratio of 1: 2: 3. If the increment of 25%, 10%, 20% are allowed respectively in their salaries, then what will be the new ratio of their salaries?

Options

This problem has only one correct answer

25:44:72
5:11:36
25:40:72
5:12:13

Correct Answer : A

Solution Description

Let the salaries of Aman, Bimal, Charan be Rs. 100, Rs. 200, Rs. 300 respectively, then after increment their new salaries will be
Rs. 100(1+25/100),
200(1+10/100),

300(1+20/100)

or Rs. 125, Rs. 220, Rs. 360 respectively.

So the required ratio = 125: 220: 360 = 25: 44: 72

19-Ass : Relation Between A and B

Send Feedback

If A = 4 when B = 24, find B when A = 7, where B varies directly as A.

Options

This problem has only one correct answer

6
24
42
60

Correct Answer : C

Solution Description

A = kB

∴ k = A/B i.e. k = 4/24 = 1/6

When, A = 7, 1/6 = 7/B

i.e. B = 42.

20-Ass : Value of?

Send Feedback

If (a/(x+y-z))=(b/(y+z-x))=(c/(z+x-y)), find the value of (x-y)a + (y-z)b + (z-x)c.

Options

This problem has only one correct answer

1
0
+-(1/2)
-1

Correct Answer : B

Solution Description

Let

(a/(x+y-z))=(b/(y+z-x))=(c/(z+x-y))=k

a= k(x + y - z) ; b = k(y + z - x) ; c = k(z + x - y)

(x-y) (x + y - z)k + (y - z) (y + z - x)k + (z - x) (z + x - y)k

Therefore on opening the bracket the value will come down to 0.