05.09.2020 FN SESSION CTS

2. When the price of a pair of shoes is decreased by 10%, the number of pairs sold increased by 20%. What is the net effect on sales?

No of Pairs of Shoes \* Price per Shoe = Sales

10 \* 100 = 1000

12 90 = 1080

Increase % = ((1080 – 1000) / 1000) \* 100 = (80 / 1000) \* 100 = 8 %

Successive Percentage change Formula

A+ B+(AB/100) =-10 + 20 – (200/100)=10-2 = 8%

A. When the percentage changes(20 % increase & 10 % decrease) are applied to a single number.

A = -10 % ; B = 20 %

3. Length and breadth of a rectangle are directly proportional. If length increases from 6 cm to 21 cm and if breadth now is 14 cm, then what was the breadth before any change in length occurred?

Length and Breadth are directly Proportionate

Len Brea

6 cm x cm

21cm 14 cm

x = 4 cm

Method for inversely proportionate.

Len Brea

1/6 cm x cm

1/21cm 14 cm

X = 49 cm

4. The LCM of two numbers is 35322. If the numbers are in the ratio 1:3, then

their HCF is ?

LCM 2 nos 35 322

2 nos are in the ratio 1 : 3

First number is x.

Second Number is 3x.

Ex: HCF(25,75) =5(5,15)=5\*5(1,3)

Co prime 1(16,17) 1(17, 19) 1(21, 23) 1( 21, 29) (21 24) not co prime 3(7,8)

Co prime nos have HCF as 1.

HCF (x,3x) =x (1,3)

HCF (x,3x) = x

Prod of 2 nos = LCM \* HCF

x \* 3x = 35 322 \* x

x = 11774 = HCF

5. A number X when divided by 13 leaves the remainder 12, what is the remainder when we divide X13 by 13?

A number X leaves a remainder 12 when div by 13.

Possibilities for X is 12,25,38,51,64,77,90……………

What is remainder when X13 / 13 ? = 12

R [ 1213 / 13 ] = 12.

R [ 121 / 13 ] = 12. R [ 123 / 13 ] = 12. R [ 125 / 13 ] = 12. R [ 127 / 13 ] = 12………

R [ 122 / 13 ] = 1. R [ 124 / 13 ] = 1 R [ 126 / 13 ] = 1 R [ 128 / 13 ] = 1…………

R [ 2513 / 13 ] = R [ 1213 / 13 ]

R [ 3813 / 13 ] = R [ 1213 / 13 ]

R [ 5113 / 13 ] = R [ 1213 / 13 ]

6. A started a business with Rs. 270,000 and was joined by B three months afterwards. How much money did B invest if the profit share of A at the end of the year was three-fifth of the total profit?

Profit sharing ratio is equal to A : B

Investment ratio will also be equal to A : B

A = 1000 B = 100 investment

Investment ratio = 1000 : 100 = 10 : 1.

Profit Sharing ratio = 10 : 1

Profit 110

A = (10 / 11) \* 110 = 100

B = (1 / 11) \* 110 = 10

A = 2 70 000 for 12 mths

A is investing 2 70 000 for 12 mths

B is investing x for 9 mths.

B = x for 9 mths

2 70 000 \* 12 = 3

x \* 9 2

x = 2 40 000

Profit ratio = 3 : 2

Investment ratio = 3 : 2

A’s share = 3 / 5 of total, A’s share is 3 parts out of 5 parts.

Out of a total of 5 parts , 3 parts is A’s share. 🡪 B’s share will be 2 parts.

B’s share = 2 / 5 of total B’s share is 2 parts out of 5 parts