Banking Daily Quiz Blog - September 26

1. **Read the instruction carefully and answer the questions based on it.**

In the following questions two equations numbered I and II are given. You have to solve both the equations and Give answer

a) If $X > Y$

b) If $X \geq Y$

c) If $X < Y$

d) If $X \leq Y$

e) $X = Y$ or Relationship cannot be established.

A. $34X^2 - 140X + 16 = 0$

$24Y^2 - 55Y + 26 = 0$

A   A

B   B

C   C

D   D

E   E

Solution

$34X^2 - 140X + 16 = 0$

$24Y^2 - 55Y + 26 = 0$

$34X^2 - 140X + 16 = 0$

$34X^2 - 136X - 4X + 16 = 0$

$34X(X - 4) - 4(X - 4) = 0$

$(34X - 4)(X - 4) = 0$

$X = 4, \frac{4}{34} = 4, \frac{2}{17}$

$24Y^2 - 55Y + 26 = 0$

$24Y^2 - 16Y - 39Y + 26 = 0$

$8Y(3Y - 2) - 13(3Y - 2) = 0$

$(8Y - 13)(3Y - 2) = 0$

$Y = \frac{2}{3}, \frac{13}{8}$

Hence, relationship between X and Y cannot be established

B. $\sqrt{2025}X + \sqrt{8100} = 0$

$(625)^{\frac{1}{4}}Y + (1331)^{\frac{1}{3}} = 0$

A   **A**

B   B

C   C

D   D

Solution

$$\sqrt{2025}X + \sqrt{8100} = 0$$

$$45X + 90 = 0$$

$$X = -2$$

$$(625)^{\frac{1}{4}}Y + (1331)^{\frac{1}{3}} = 0$$

$$5Y + 11 = 0$$

$$Y = -2.2$$

$$X > Y$$

C. $X(10X-1) = 2$

$4Y^2 + 3Y - 27 = 0$

A | A

B | B

C | C

D | D

E | E

Solution

$X(10X - 1) = 2$

$10X^2 - X - 2 = 0$

$10X^2 - 5X + 4X - 2 = 0$

$(5X + 2)(2X - 1) = 0$

$X = 0.5, -0.4$

$4Y^2 + 3Y - 27 = 0$

$4Y^2 + 12Y - 9Y - 27 = 0$

$(4Y - 9)(Y + 3) = 0$

$Y = -3, 2.25$

Hence, relationship between X and Y cannot be established

2. **Ajay and Vijay started a business together with an investment of Rs. (1400 + x) and (1800 + 2x). After a year Vijay received a profit of Rs. 3200 out of total profit of Rs.5600. What is the initial investment of Ajay?**

A   Rs. 1750

B   Rs. 1250

C   Rs. 1000

D   Rs. 1200

E   **Rs. 1500**

Solution

Ratio of profit share

Ajay : Vijay

$$\frac{(1400+x)}{(1800+2x)} = \frac{(5600-3200)}{3200}$$

$$\frac{(1400+x)}{(1800+2x)} = \frac{2400}{3200}$$

$$\frac{(1400+x)}{(1800+2x)} = \frac{3}{4}$$

$$5600 + 4x = 5400 + 6x$$

$2x = 200$

$x = 100$

Investment of Ajay $= 1400 + 100 = Rs.\ 1500$

3. **Mona bought a printer and sold it to Sona for Rs.2400 thereby making a profit of 20%. At what price Mona must sell the printer to earn a profit of 60%?**

A   Rs. 2500

B   Rs. 2800

C   Rs. 3000

D   **Rs. 3200**

E   Rs. 3500

Solution

CP of printer for Mona $= x$

ATQ,

$X \times \frac{(100+20)}{100} = 2400$

$X = \frac{5}{6} \times 2400$

$X = 2000$

So, CP of printer for Mona $= 2000$

To make a profit of 60%,

$SP = [\frac{(100+60)}{100}] \times 2000 = Rs.\ 3200$

4. The interest earned on Rs. 6800 at rate of $x\%$ compounded annually is Rs. 1428 after 2 years. What would be the SI earned on the same amount at the rate of $(x + 5)\%$ per annum after 3 years?

A   **Rs. 3060**

B   Rs. 3140

C   Rs. 3260

D   Rs. 3450

E   Rs. 3520

Solution

According to the question,

$6800 \times (\frac{(x+100)}{100})(\frac{(x+100)}{100)} - 6800 = 1428$

$6800 \times (\frac{(x+100)}{100})(\frac{(x+100)}{100}) = 8228$

$68 \times \frac{(x+100)^2}{100} = 8228$

$(X + 100)^2 = 12100$

$X + 100 = 110$

$X = 10$

For SI, R $= 10 + 5 = 15\%$

$SI = \frac{6800 \times 15 \times 3}{100} = Rs.\ 3060$

5. **20 lakh tourists came to visit Jim Corbett National park in 2015. There was an increase of seven percent in the number of tourist arrivals in 2016. If the rate is further appreciated by 2 percent points in 2017, how many tourists visit the National park in year 2017?**

A 2238500

B 245100

C **2332600**

D 241200

E 2162400

Solution

No. of tourists to visit the National Park in $2015 = 20,00,000$

The tourists increase by 7 percent in 2016

Thus, No. of tourists in $2016 = 1.07 \times 20,00,000 = 21,40,000$

The rate of increase is further increased by two percent points i.e. 9%

Thus, No. of tourists in $2017 = 1.09 \times 21,40,000 = 23,32,600$

6. **The average of 9 numbers is 11. If each of these 9 numbers is multiplied by 5 and then 5 is added to each of these resultant numbers, what is the new average?**

A   48

B   40

C   55

D   50

E   **60**

Solution

Since the average of 9 numbers is 11, total sum of all 9 numbers

$= 9 \times 11 = 99$

If 5 is multiplied with each number, the effect will be same as multiplying 5 with 99.

The new total alter multiplying each number by 5 is $99 \times 5 = 495$

Now 5 is added to each number, so in total 45 is added.

The new total after addition of 5 to each number $= 495 + 45 = 540$

The new average $= \frac{540}{9} = 60$

7. **A. B and C invested Rs. 21000, Rs. 12000 and Rs. 15000 respectively in a business. A added Rs. 1000 alter every quarter and B withdrew the same after every quarter and C adds Rs. 5000 after 6 months. At the end of one year, find by how much percent the profit share of B is more/less than that of A and C taken together.**

A 78.75% less

B 70.75% less

C 75.75% less

D 83.75% less

E **73.75% less**

Solution

Ratio of profit share of A, B and C after one year

$$=> (21000 \times 3 + 22000 \times 3 + 23000 \times 3 + 24000 \times 3)$$
$$: (12000 \times 3 + 11000 \times 3 + 10000 \times 3 + 9000 \times 3)$$
$$: (15000 \times 6 + 20000 \times 6)$$
$$=> 270 : 126 : 210$$
$$=> 45 : 21 : 35$$

Required percentage $= \frac{(35+45)-21}{(35+45)} \times 100\% = 73.75\%$ less

8. **There is a rectangular garden of length 120 m and breadth 80 m. There is path inside the rectangular garden around its border so that people can walk around it. If there is still $8816\ m^2$ area is left, then what is the width of the path?**

A 3.2 m

B 1.8 m

C 2 m

D 2.8 m

E 2.5 m

Solution

Let's assume width of the path = d meter

Therefore, dimensions of the remaining field will be (120 - 2d) meter and (80 - 2d) meter respectively.

Now according to the question;

$(120 - 2d) \times (80 - 2d) = 8816$

$=> (60 - d) \times (40 - d) = 2204$

$=> d^2 - 100d + 196 = 0$

Solving this the only acceptable solution that we will get: $d = 2\ m$