

Course: SBI Clerk Pre

Subject: :Simplification, Missing Series and Quadratic Inequalities

Time:15 Minutes

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Directions (1-5): निम्नलिखित संख्या श्रृंखला में प्रश्नवाचक चिह्न (?) के स्थान पर क्या मान आएगा:

Q1. 36, 39, 43, 49, 58, 71, ?

- (a) 80
- (b) 84
- (c) 97
- (d) 89
- (e) 92

L1Difficulty 2

QTags MISSING SERIES Quant

QCreator Amit Kumar Singh

Q2. 1296, 648, 216, 108, 36, ?

- (a) 30
- (b) 18
- (c) 12
- (d) 24
- (e) 36

L1Difficulty 2

QTags MISSING SERIES Quant

QCreator Amit Kumar Singh

Q3. 3, 2, 2, 3, 8, ?

- (a) 45
- (b) 35
- (c) 25
- (d) 17
- (e) 16

L1Difficulty 2

QTags MISSING SERIES Quant

QCreator Amit Kumar Singh

Q4. 128, 64, 96, 240, 840, ?

(a) 6840

(b) 3360

(c) 3390

(d) 4260

(e) 3780

L1Difficulty 2

QTags MISSING SERIES Quant

QCreator Amit Kumar Singh

Q5. 2, 3, 5, 7, ?, 13, 17

(a) 9

(b) 11

(c) 12

(d) 10

(e) 8

L1Difficulty 2

QTags MISSING SERIES Quant

QCreator Amit Kumar Singh

Directions (6-10): निम्नलिखित प्रश्नों में प्रश्नवाचक चिह्न (?) के स्थान पर क्या मान आएगा:

Q6. $\frac{8.64 \times \frac{1}{7}}{1.8 \times 0.2} = 100$

(a) 240

(b) 2.40

(c) 24

(d) 0.024

(e) 0.24

L1Difficulty 2

QTags Simplification

QCreator Amit Kumar Singh

Q7. $693 \div ? \times 625 \div 55 = 875$

- (a) 5
- (b) 4
- (c) 9
- (d) 8
- (e) 6

L1Difficulty 2

QTags Simplification

QCreator Amit Kumar Singh

Q8. $\frac{2}{3} \times \frac{5}{7} \times \frac{14}{25} \times ? = 100$

- (a) 235
- (b) 375
- (c) 425
- (d) 328
- (e) 548

L1Difficulty 2

QTags Simplification

QCreator Amit Kumar Singh

Q9. $(240 \text{ का } \frac{2}{3}) \div 0.8 = ?$

- (a) 200
- (b) 240
- (c) 160
- (d) 180
- (e) 220

L1Difficulty 2

QTags Simplification

QCreator Amit Kumar Singh

Q10. $125 \text{ का } 43 \% \times 12 = ? - 55$

(a) 865

(b) 832

(c) 664

(d) 700

(e) 732

L1Difficulty 2

QTags Simplification

QCreator Amit Kumar Singh

Directions (11 – 15): दिए गए द्विघात समीकरणों को हल करें और अपने उत्तर के आधार पर सही विकल्प को अंकित कीजिए।

(a) यदि $x > y$

(b) यदि $x \geq y$

(c) यदि $x < y$

(d) यदि $x \leq y$

(e) यदि $x = y$ या x और y के मध्य कोई सम्बन्ध स्थापित नहीं किया जा सकता

Q11. I. $x^2 - 12x + 35 = 0$

II. $y^2 - 15y + 54 = 0$

L1Difficulty 2

QTags Quadratic Inequalities

QCreator Amit Kumar Singh

Q12. I. $x^2 + 4x + 3 = 0$

II. $y^2 + 8y + 15 = 0$

L1Difficulty 2

QTags Quadratic Inequalities

QCreator Amit Kumar Singh

Q13. I. $4x^2 - 8x + 3 = 0$

II. $4y^2 - 1 = 0$

L1Difficulty 2

QTags Quadratic Inequalities

QCreator Amit Kumar Singh

Q14. I. $2x^2 - 11x + 15 = 0$

II. $4y^2 - 8y + 3 = 0$

L1Difficulty 2

QTags Quadratic Inequalities

QCreator Amit Kumar Singh

Q15. I. $x^2 = 225$

II. $(y + 15)^2 = 0$

L1Difficulty 2

QTags Quadratic Inequalities

QCreator Amit Kumar Singh

Solutions

S1. Ans (d)

Sol.

$$\begin{array}{ccccccccc} 36 & 39 & 43 & 49 & 58 & 71 & 89 & & \\ \underbrace{\hspace{1.5em}} & \underbrace{\hspace{1.5em}} & \underbrace{\hspace{1.5em}} & \underbrace{\hspace{1.5em}} & \underbrace{\hspace{1.5em}} & \underbrace{\hspace{1.5em}} & & & \\ 3 & 4 & 6 & 9 & 13 & 18 & & & \\ \underbrace{\hspace{1.5em}} & \underbrace{\hspace{1.5em}} & \underbrace{\hspace{1.5em}} & \underbrace{\hspace{1.5em}} & \underbrace{\hspace{1.5em}} & & & & \\ 1 & 2 & 3 & 4 & 5 & & & & \end{array}$$

S2. Ans (b)

Sol.

$$\begin{array}{ccccccccc} 1296 & 648 & 216 & 108 & 36 & 18 & & & \\ \underbrace{\hspace{1.5em}} & \underbrace{\hspace{1.5em}} & \underbrace{\hspace{1.5em}} & \underbrace{\hspace{1.5em}} & \underbrace{\hspace{1.5em}} & & & & \\ \div 2 & \div 3 & \div 2 & \div 3 & \div 2 & & & & \end{array}$$

S3. Ans (b)

Sol.

$$\begin{array}{ccccccccc} 3 & 2 & 2 & 3 & 8 & 35 & & & \\ \underbrace{\hspace{1.5em}} & \underbrace{\hspace{1.5em}} & \underbrace{\hspace{1.5em}} & \underbrace{\hspace{1.5em}} & \underbrace{\hspace{1.5em}} & & & & \\ x1-1 & x2-2 & x3-3 & x4-4 & x5-5 & & & & \end{array}$$

S4. Ans (e)

Sol.

$$128 \times \frac{1}{2} = 64$$

$$64 \times \frac{3}{2} = 96$$

$$96 \times \frac{5}{2} = 240$$

$$240 \times \frac{7}{2} = 840$$

$$840 \times \frac{9}{2} = 3780$$

S5. Ans (b)

Sol.

The given series pattern on the prime number.

2, 3, 5, 7, 11, 13, 17

S6. Ans (e)

$$\text{Sol. } 8.64 \times \frac{1}{?} = 100 \times 1.8 \times 0.2$$

$$? = \frac{8.64}{36}$$

$$= 0.24$$

S7. Ans (c)

$$\text{Sol. } \frac{693}{?} \times \frac{625}{55} = 875$$

$$? = \frac{693}{875} \times \frac{625}{55}$$

$$? = 9$$

S8. Ans (b)

Sol.

$$? = \frac{100 \times 3 \times 7 \times 25}{2 \times 5 \times 14} = 375$$

S9. Ans (a)

Sol.

$$? = \frac{\frac{2}{3} \times 240}{0.8}$$

$$? = 200$$

S10. Ans. (d)

$$\text{Sol. } \frac{43}{100} \times 125 \times 12 + 55 = ?$$

$$? = 700$$

S11. Ans(e)

Sol.

$$I. x^2 - 12x + 35 = 0$$

$$x^2 - 7x - 5x + 35 = 0$$

$$x(x - 7) - 5(x - 7) = 0$$

$$x = 7, 5$$

$$II. y^2 - 9y - 6y + 54 = 0$$

$$y(y - 9) - 6(y - 9) = 0$$

$$y = 9, 6$$

no relation can be established between x and y.

S12. Ans(b)

Sol.

$$I. x^2 + 4x + 3 = 0$$

$$x^2 + 3x + x + 3 = 0$$

$$x(x + 3) + 1(x + 3) = 0$$

$$(x + 1)(x + 3) = 0$$

$$x = -3, -1$$

$$II. y^2 + 5y + 3y + 15 = 0$$

$$y(y + 5) + 3(y + 5) = 0$$

$$y = -5, -3$$

So, $x \geq y$

S13. Ans(b)

Sol.

$$I. 4x^2 - 6x - 2x + 3 = 0$$

$$2x(2x - 3) - 1(2x - 3) = 0$$

$$x = 1/2, 3/2$$

$$II. 4y^2 - 1 = 0$$

$$y^2 = \frac{1}{4}$$

$$y = \pm \frac{1}{2}$$

So, $x \geq y$

S14. Ans(a)

Sol.

$$\text{I. } 2x^2 - 6x - 5x + 15 = 0$$

$$2x(x - 3) - 5(x - 3) = 0$$

$$x = 3, \frac{5}{2}$$

$$\text{II. } 4y^2 - 6y - 2y + 3 = 0$$

$$2y(2y - 3) - 1(2y - 3) = 0$$

$$y = \frac{3}{2}, \frac{1}{2}$$

So, $x > y$

S15. Ans(b)

Sol.

$$\text{I. } x^2 = 225$$

$$x = -15, +15$$

$$\text{II. } y = -15$$

So, $x \geq y$