Subject: Wrong Series, Approximation, Quadratic Inequalities

Time:12 Minutes
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Directions (1-5):- दिए गए संख्या श्रृंखला प्रश्नों में गलत पद ज्ञात कीजिए-

Q1. 17, 20, 25, 37, 57, 87, 129
(a) 17
(b) 129
(c) 25
(d) 87
(e) 20
L1Difficulty 3
QTags Wrong Series
QCreator AYUSH PANDEY

Q2. 128, 64, 96, 240, 840, 3800, 20790
(a) 3800
(b) 128
(c) 20790
(d) 96
(e)240
L1Difficulty 3
QTags Wrong Series
QCreator AYUSH PANDEY

Q3. 14, 20, 40, 82, 154, 264, 450
(a) 154
(b) 20
(c) 264
(d) 14
(e) 450
L1Difficulty 3
QTags Wrong Series
QCreator AYUSH PANDEY

Q4. 64, 56, 65, 49, 74, 38, 87
(a) 87
(b) 64
(c) 38
(d) 56
(e) 49

Q5.   2,   5,   11,   35,   143,   719,   4319
(a) 11
(b) 719
(c) 5
(d) 4319
(e) 2

Direction (6-10): निम्नलिखित प्रश्नों में प्रश्नवाचक चिन्ह (?) के स्थान पर आने वाले अनुमानित मान को ज्ञात कीजिए-

Q6. $\frac{420.12}{?} = (361.11)^{\frac{1}{2}} - 22.01 \times 6.99 + 141.99$
   (a) 60
   (b) 70
   (c) 40
   (d) 35
   (e) 75

Q7. ? + 185.10 – 79.09 = (23.01)^2 - 70.01% of 139.99
   (a) 400
   (b) 375
   (c) 350
   (d) 325
   (e) 300

Q8. $\sqrt{783.98} + (22.02)^2 = 2 \times (?)^2$
   (a) 4
   (b) 8
   (c) 16
   (d) 32

(e) 64

Q9. 44.04% of 349.98 + 205.01% of 140.01 = $(?)^2$
    (a) 29
    (b) 361
    (c) 19
    (d) 441
    (e) 21

Q10. $\frac{?}{4} + 44.01 + 139.99 = 78.09 + 249.01 + 86.99$
    (a) 230
    (b) 920
    (c) 220
    (d) 1880
    (e) 960

Directions (11-15): प्रत्येक प्रश्न में दो समीकरण (I) और (II) दिए गए हैं। समीकरणों को हल करें और उचित उत्तर दीजिए-

    (a) यदि x=y या कोई संबंध स्थापित नहीं किया जा सकता है

    (b) यदि x>y

    (c) यदि x<y

    (d) यदि x≥y

    (e) यदि x≤y

Q11. I. $25x^2 - 90x + 72 = 0$
    II. $5y^2 - 27y + 36 = 0$

Q12. I. $12x^2 + 46x + 42 = 0$
    II. $3y^2 - 16y + 21 = 0$

L1Difficulty 3
QTags Quadratic Inequalities
QCreator AYUSH PANDEY

Q13. I. $4x^2 + 10x = 14$

II. $15 = 16y - 4y^2$

L1Difficulty 3
QTags Quadratic Inequalities
QCreator AYUSH PANDEY

Q14. I. $6x^2 + 15x - 36 = 0$

II. $4y^2 - 2y - 10 = -8$

L1Difficulty 3
QTags Quadratic Inequalities
QCreator AYUSH PANDEY

Q15. I. $2x^2 - 19x + 44 = 0$

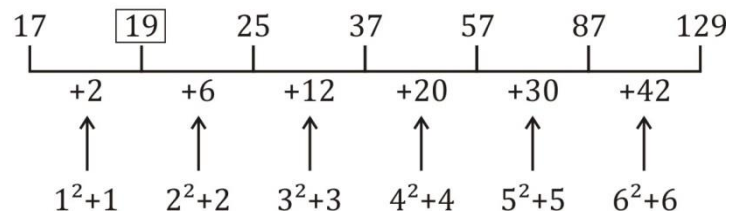II. $3y^2 - 22y + 40 = 0$

L1Difficulty 3
QTags Quadratic Inequalities
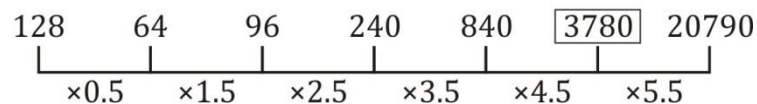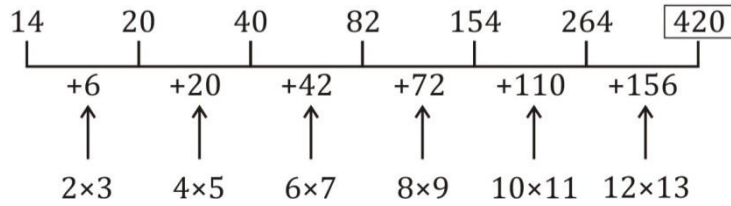QCreator AYUSH PANDEY

Solutions

S1. Ans.(e)
Sol.

S2. Ans.(a)
Sol.

S3. Ans.(e)
Sol.

14	20	40	82	154	264	420

$$+6 \quad +20 \quad +42 \quad +72 \quad +110 \quad +156$$

$$2\times3 \quad 4\times5 \quad 6\times7 \quad 8\times9 \quad 10\times11 \quad 12\times13$$

S4. Ans.(b)
Sol.

60	56	65	49	74	38	87

$$-2^2 \quad +3^2 \quad -4^2 \quad +5^2 \quad -6^2 \quad +7^2$$

S5. Ans.(e)
Sol.

5	5	11	35	143	719	4319

$$\times1+0 \quad \times2+1 \quad \times3+2 \quad \times4+3 \quad \times5+4 \quad \times6+5$$
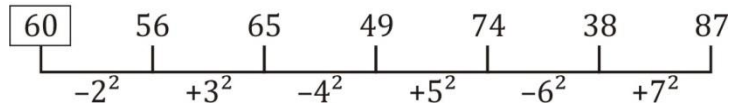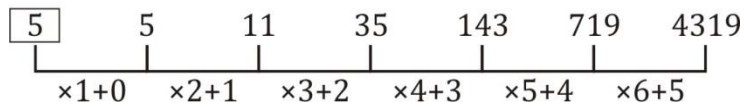
S6. Ans.(a)
Sol.
$$\frac{420.12}{?} = (361.11)^{\frac{1}{2}} - 22.01 \times 6.99 + 141.99$$
$$\Rightarrow \frac{420}{?} \simeq (361)^{\frac{1}{2}} - 22 \times 7 + 142$$
$$\Rightarrow \frac{420}{?} \simeq 19 - 154 + 142$$
$$\Rightarrow \frac{420}{?} \simeq 7$$
$$\Rightarrow ? \simeq \frac{420}{7} \simeq 60$$

S7. Ans.(d)
Sol.
? + 185.10 – 79.09 = $(23.01)^2$ - 70.01% of 139.99
$$\Rightarrow ? + 185 - 79 \simeq (23)^2 - \frac{70}{100} \times 140$$
$$\Rightarrow ? + 106 \simeq 529 - 98$$
$$\Rightarrow ? \simeq 431 - 106 \simeq 325$$

S8. Ans.(c)
Sol.
$$\sqrt{783.98} + (22.02)^2 = 2 \times (?)^2$$
$$\Rightarrow \sqrt{784} + (22)^2 \simeq 2 \times (?)^2$$
$$\Rightarrow 28 + 484 \simeq 2 \times (?)^2$$

$\Rightarrow 512 \simeq 2 \times (?)^2$

$\Rightarrow (?)^2 \simeq 256$

$\Rightarrow ? = 16$

S9. Ans.(e)

Sol.

44.04% of $349.98 + 205.01\%$ of $140.01 = (?)^2$

$\Rightarrow \dfrac{44}{100} \times 350 + \dfrac{205}{100} \times 140 \simeq (?)^2$

$\Rightarrow 154 + 287 \simeq (?)^2$

$\Rightarrow 441 \simeq (?)^2$

$\Rightarrow ? = 21$

S10. Ans.(b)

Sol.

$\dfrac{?}{4} + 44.01 + 139.99 = 78.09 + 249.01 + 86.99$

$\Rightarrow \dfrac{?}{4} + 44 + 140 \simeq 78 + 249 + 87$

$\Rightarrow \dfrac{?}{4} \simeq 414 - 184$

$\Rightarrow \dfrac{?}{4} \simeq 230 \Rightarrow ? \simeq 920$

S11. Ans.(e)

Sol.

I. $25x^2 - 90x + 72 = 0$

$\Rightarrow 25x^2 - 30x - 60x + 72 = 0$

$\Rightarrow 5x(5x - 6) - 12(5x - 6) = 0$

$\Rightarrow x = \dfrac{6}{5}$ or $\dfrac{12}{5}$

II. $5y^2 - 27y + 36 = 0$

$\Rightarrow 5y^2 - 15y - 12y + 36 = 0$

$\Rightarrow 5y(y - 3) - 12(y - 3) = 0$

$\Rightarrow y = 3$ or $\dfrac{12}{5}$

$y \geq x$

S12. Ans.(c)

Sol.

I. $12x^2 + 46x + 42 = 0$

$\Rightarrow 12x^2 + 18x + 28x + 42 = 0$

$\Rightarrow 6x(2x + 3) + 14(2x + 3) = 0$

$\Rightarrow x = \dfrac{-3}{2}$ or $\dfrac{-14}{6}$

II. $3y^2 - 16y + 21 = 0$

$\Rightarrow 3y^2 - 9y - 7y + 21 = 0$

$\Rightarrow 3y(y-3) - 7(y-3) = 0$

$\Rightarrow y = 3 \text{ or } \frac{7}{3}$

y > x

S13. Ans.(c)

Sol.

I. $4x^2 + 10x - 14 = 0$

$\Rightarrow 4x^2 + 14x - 4x - 14 = 0$

$\Rightarrow 2x(2x+7) - 2(2x+7) = 0$

$\Rightarrow x = 1 \text{ or } \frac{-7}{2}$

II. $4y^2 - 16y + 15 = 0$

$\Rightarrow 4y^2 - 6y - 10y + 15 = 0$

$\Rightarrow 2y(2y-3) - 5(2y-3) = 0$

$\Rightarrow y = \frac{3}{2} \text{ or } \frac{5}{2}$

y > x

S14. Ans.(a)

Sol.

I. $6x^2 + 15x - 36 = 0$

$\Rightarrow 6x^2 + 24x - 9x - 36 = 0$

$\Rightarrow 6x(x+4) - 9(x+4) = 0$

$\Rightarrow x = -4 \text{ or } \frac{9}{6}$

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

$\Rightarrow 4y^2 - 4y + 2y - 2 = 0$

$\Rightarrow 4y(y-1) + 2(y-1) = 0$

$\Rightarrow y = 1 \text{ or } \frac{-1}{2}$

Relationship can't be established

S15. Ans.(d)

Sol.

I. $2x^2 - 19x + 44 = 0$

$\Rightarrow 2x^2 - 8x - 11x + 44 = 0$

$\Rightarrow 2x(x-4) - 11(x-4) = 0$

$\Rightarrow x = 4 \text{ or } \frac{11}{2}$

II. $3y^2 - 22y + 40 = 0$

$\Rightarrow 3y^2 - 12y - 10y + 40 = 0$

$\Rightarrow 3y(y-4) - 10(y-4) = 0$

$\Rightarrow y = 4 \text{ or } \frac{10}{3}$

x ≥ y