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Number Series and Quadratic Equation Questions for SBI Clerk Pre

SBI Clerk Pre Maths Quiz 2

Direction (Q. 1 - 5): Study the following questions carefully and choose the right answer.

(1). 36 18 6 3 1 ?

- A. 1 B. 0.5 C. 0.33 D. 0.25 E. None of these

(2). 18 8 6 9 32 ?

- A. 244 B. 87 C. 232 D. 251 E. None of these

(3). 250, ?, 190, 167, 148, 131

- A. 219 B. 223 C. 217 D. 211 E. None of these

(4). 244, 163, 190, 181, ?

- A. 178 B. 185 C. 184 D. 182 E. None of these

(5). 18, 29, 42, 53, ?, 77

- A. 64 B. 65 C. 66 D. 67 E. None of these

Directions (Q. 6 to 10): In each of these question, two equations (I) and (II) are given. You have to solve both the equations and give answer.

(6). I. $3x^2 + 8x + 4 = 0$ II. $6y^2 + 7y + 2 = 0$

- A. $x > y$ B. $x < y$ C. $x \leq y$
D. $x \geq y$
E. $x = y$ or relationship between x and y can't be established

(7). I. $x^2 - 4x - 12 = 0$ II. $y^2 - 5y - 14 = 0$

- A. $x > y$ B. $x < y$ C. $x \leq y$
D. $x \geq y$
E. $x = y$ or relationship between x and y can't be established

(8). I. $6x^2 - 11x + 4 = 0$ II. $50y^2 - 25y + 3 = 0$

A. $x > y$

B. $x < y$

C. $x \leq y$

D. $x \geq y$

E. $x = y$ or relationship between x and y can't be established

(9). I. $x^2 - 5x + 6 = 0$ II. $y^2 - 9y + 20 = 0$

A. $x > y$

B. $x < y$

C. $x \leq y$

D. $x \geq y$

E. $x = y$ or relationship between x and y can't be established

(10). (I). $39x^2 - 31x - 28 = 0$ (II). $y^2 - 25y + 114 = 0$

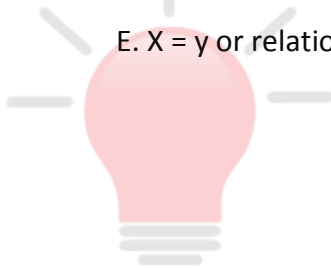
A. $x > y$

B. $x < y$

C. $x \leq y$

D. $x \geq y$

E. $x = y$ or relationship between x and y can't be established



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Correct answers:

1	2	3	4	5	6	7	8	9	10
B	D	A	C	C	C	E	A	B	B

Explanations:

1.

Series Pattern Given Series

$$36 \quad 36$$

$$\frac{36}{2} \quad 18$$

$$\frac{18}{3} \quad 6$$

$$\frac{6}{2} \quad 3$$

$$\frac{3}{3} \quad 1$$

$$\frac{1}{2} \quad 0.5$$

Hence, option B is correct.

2.

Series Pattern Given Series

$$18 \quad 18$$

$$18 \times 0.5 - 1 \quad 8$$

$$8 \times 1 - 2 \quad 6$$

$$6 \times 2 - 3 \quad 9$$

$$9 \times 4 - 4 \quad 32$$

$$32 \times 8 - 5 \quad 251 \quad \checkmark$$

Hence, option D is correct.

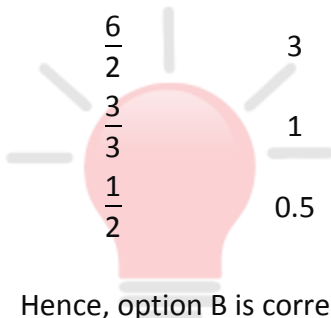
3.

Series Pattern Given Series

$$250 \quad 250$$

$$250 - 31 \quad \mathbf{219} \quad \checkmark$$

$$219 - 29 \quad 190$$



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$190 - 23$	167
$167 - 19$	148
$148 - 17$	131

Hence, option A is correct.

4.

Series Pattern Given Series

244	244
$244 - 3^4$	163
$163 + 3^3$	190
$190 - 3^2$	181
$181 + 3$	184 ✓

Hence, option C is correct.

5.

Series Pattern Given Series

18	18
$18 + 11$	29
$29 + 13$	42
$42 + 11$	53
$53 + 13$	66 ✓
$66 + 11$	77

Hence, option C is correct.

6.

$$1. 3x^2 + 8x + 4 = 0$$

$$\text{or, } 3x^2 + 6x + 2x + 4 = 0$$

$$\text{or, } 3x(x + 2) + 2(x + 2) = 0$$

$$\text{or, } (3x + 2)(x + 2) = 0$$

$$\text{or, } x = -\frac{2}{3}, -2$$



$$\text{II. } 6y^2 + 7y + 2 = 0$$

$$\text{or, } 6y^2 + 3y + 4y + 2 = 0$$

$$\text{or, } 3y(2y + 1) + 2(2y + 1) = 0$$

$$\text{or, } (3y + 2)(2y + 1) = 0$$

$$\text{or, } y = -\frac{2}{3}, -\frac{1}{2}$$

While comparing the root values of x and y , we find that one root value of x is equal and another is less than the root values of y . Hence, the relationship between x and y is $x \leq y$.

Thus, option C is correct.

7.

$$\text{I. } x^2 - 4x - 12 = 0$$

$$\text{or, } x^2 - 6x + 2x - 12 = 0$$

$$\text{or, } x(x - 6) + 2(x - 6) = 0$$

$$\text{or, } (x + 2)(x - 6) = 0$$

$$\text{or, } x = -2, 6$$

$$\text{II. } y^2 - 5y - 14 = 0$$

$$\text{or, } y^2 - 7y + 2y - 14 = 0$$

$$\text{or, } y(y - 7) + 2(y - 7) = 0$$

$$\text{or, } (y + 2)(y - 7) = 0$$

$$\text{or, } y = -2, 7$$

While comparing the root values of x and y , we find that one root value of x lies between the values of y . Hence, the relationship between x and y can't be established.

Thus, option E is correct.



8.

I. $6x^2 - 11x + 4 = 0$

or, $6x^2 - 3x - 8x + 4 = 0$

or, $3x(2x - 1) - 4(2x - 1) = 0$

or, $(3x - 4)(2x - 1) = 0$

or, $x = 4/3, 1/2$

II. $50y^2 - 25y + 3 = 0$

or, $50y^2 - 10y - 15y + 3 = 0$

or, $10y(5y - 1) - 3(5y - 1) = 0$

or, $(10y - 3)(5y - 1) = 0$

or, $y = 3/10, 1/5$

While comparing the root values of x and y, we find that both the root values of x are greater than the values of y. Hence, the relationship between x and y is $x > y$.

Thus, option A is correct.

9.

I. $x^2 - 5x + 6 = 0$

or, $x^2 - 2x - 3x + 6 = 0$

or, $x(x - 2) - 3(x - 2) = 0$

or, $(x - 3)(x - 2) = 0$

or, $x = 3, 2$

II. $y^2 - 9y + 20 = 0$

or, $y^2 - 5y - 4y + 20 = 0$

$$\text{or, } y(y - 5) - 4(y - 5) = 0$$

$$\text{or, } (y - 5)(y - 4) = 0$$

$$\text{or, } y = 4, 5$$

While comparing the root values of x and y , we find that both the root values of y are greater than the values of x . Hence, the relationship between x and y is $x < y$.

Thus, option B is correct.

10.

$$\text{(I). } 39x^2 - 31x - 28 = 0$$

$$\text{Or, } 39x^2 - 52x + 21x - 28 = 0$$

$$13x(3x - 4) + 7(3x - 4) = 0$$

$$(13x + 7)(3x - 4) = 0$$

$$x = -\frac{7}{13}, \frac{4}{3}$$

$$\text{(II). } y^2 - 25y + 114 = 0$$

$$\text{Or, } y^2 - 19y - 6y + 114 = 0$$

$$y(y - 19) - 6(y + 19) = 0$$

$$(y - 19)(y - 6) = 0$$

$$y = 19, 6$$

$$x < y$$

Hence, option B is correct.





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