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## Simplification Questions for SBI PO Pre, IBPS PO Pre, SBI Clerk Mains and IBPS Clerk Mains Exams.

### Simplification Quiz 34

Directions: What value should come in place of Question mark (?) in the following question?

1.  $(2^{12} - 3^9) \times (3^6 - 9^3) + 11^2 = ?$

- A. 12251      B. 17781      C. 91641      D. 72361      E. None of these

2.  $(37.5 \times 22 \times 48) \div 2^4 - ? = (11)^3$

- A. 1234      B. 1144      C. 1284      D. 1384      E. 1674

3.  $(47 + 47 + 47 + 47 + 47 + 47) \times 5 \times (47 + 47) \times 6 \div (47 \times 2) = 47 \times ?$

- A.  $47 \times 180$       B.  $47 \times 90$       C. 90      D. None of these      E. 124

4.  $2\sqrt{3} \times 3\sqrt{8} \times 2\sqrt{27} \times 2\sqrt{2} = 2^4 \times ?$

- A. 18      B. 54      C. 9      D. 27      E. None of these

5.  $17^2 + 19^2 + ? = 21^2 + 15^2$

- A. -16      B. 0      C. 32      D. 36      E. 16

6.  $\frac{1}{1 \times 6} + \frac{1}{6 \times 11} + \frac{1}{11 \times 16} + \frac{1}{16 \times 21} = ?$

- A.  $\frac{3}{21}$       B.  $\frac{8}{42}$       C.  $\frac{2}{21}$       D.  $\frac{20}{21}$       E. None of these

7.  $(5175 \div 23)^{1/2} + (72 \times 2)^{1/2} = (?)^{1/2}$

- A. 26      B. 29      C. 729      D. 841      E. None of these

8.  $641.23 - 228.48 - 124.21 = ?$

- A. 378.54      B. 278.54      C. 288.54      D. 298.54      E. None of these

9.  $\frac{\sqrt{3} + 1}{\sqrt{3}-1} \times 20^2 - 3^{1/2} \times 2^2 \times 10^2 = (?) \times 10$

- A. 30      B. 20      C. 90      D. 120      E. None of these

10.  $\sqrt{15 + \sqrt{?}} = 3^{3/2}$

- A. 12      B. 13      C. 169      D. 144      E. None of these

**Correct Answers:**

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

**Explanations:**

1.  $(2^{12} - 3^9) \times (3^6 - 9^3) + 11^2 = ?$

$$? = (2^{12} - 3^9) \times (729 - 729) + 121$$

$$? = 121 + 0 = 121$$

Hence, option E is correct.

2.  $(37.5 \times 22 \times 48) \div 2^4 - ? = (11)^3$

$$\frac{37.5 \times 22 \times 48}{16} - 1331 = ?$$

$$? = 37.5 \times 22 \times 3 - 1331$$

$$? = 2475 - 1331 = 1144$$

Hence, option B is correct.

3.  $(47 + 47 + 47 + 47 + 47 + 47) \times 5 \times (47 + 47) \times 6 \div (47 \times 2) = 47 \times ?$

$$47 \times 6 \times 5 \times 47 \times 2 \times \frac{6}{47 \times 2} = 47 \times ?$$

$$47 \times 6 \times 5 \times 6 = 47 \times ?$$

$$? = 180$$

Hence, option D is correct.

4.  $2\sqrt{3} \times 3\sqrt{8} \times 2\sqrt{27} \times 2\sqrt{2} = 2^4 \times ?$

$$2^4 \times ? = 2\sqrt{3} \times 6\sqrt{2} \times 6\sqrt{3} \times 2\sqrt{2}$$

$$? \times 2^4 = 2 \times 6 \times 6 \times 2 \times 3 \times 2$$

$$? = 3 \times 3 \times 3 \times 2 = 54$$

Hence, option B is correct.

5.  $17^2 + 19^2 + ? = 21^2 + 15^2$

$$289 + 361 + ? = 441 + 225$$

$$? = 666 - 650 = 16$$

Hence, option E is correct.

6.

$$\frac{1}{1 \times 6} + \frac{1}{6 \times 11} + \frac{1}{11 \times 16} + \frac{1}{16 \times 21} = ?$$

$$? = \frac{1}{5} \left( 1 - \frac{1}{6} + \frac{1}{6} - \frac{1}{11} + \frac{1}{11} - \frac{1}{16} + \frac{1}{16} - \frac{1}{21} \right)$$

$$? = \frac{1}{5} \left( 1 - \frac{1}{21} \right)$$

$$? = \frac{1}{5} \times \frac{20}{21}$$

$$? = \frac{4}{21} = \frac{8}{42}$$

Hence, option B is correct.

7.  $(5175 \div 23)^{1/2} + (72 \times 2)^{1/2} = (?)^{1/2}$

$$225^{1/2} + 144^{1/2} = (?)^{1/2}$$

$$15 + 12 = 27 = ?^{1/2}$$

$$? = 729$$

Hence, option C is correct.

8.  $641.23 - 228.48 - 124.21 = ?$

$$? = 288.54$$

Hence, option C is correct.

9.

$$\frac{\sqrt{3} + 1}{\sqrt{3} - 1} \times 20^2 - 3^{1/2} \times 2^2 \times 10^2 = (?) \times 10$$

$$(?) \times 10 = \frac{\sqrt{3} + 1}{\sqrt{3} - 1} \times \frac{\sqrt{3} + 1}{\sqrt{3} + 1} \times 400 - \sqrt{3} \times 4 \times 100$$

$$(?) \times 10 = \frac{(\sqrt{3} + 1)^2}{2} \times 400 - 400\sqrt{3}$$

$$(?) \times 10 = (3 + 1 + 2\sqrt{3}) \times 200 - 400\sqrt{3}$$

$$(?) \times 10 = 4 \times 200 + 400\sqrt{3} - 400\sqrt{3}$$

$$(?) \times 10 = 8 \times 100$$

$$(?) \times 10 = 800$$

$$? = 80$$

Hence, option E is correct.

10.

$$\sqrt{15 + \sqrt{?}} = 3^{3/2}$$

$$15 + ?^{1/2} = 3^3$$

$$?^{1/2} = 27 - 15 = 12$$

$$? = 144$$

Hence, option D is correct.



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