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

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

1. **61% of 550 − ?% of 250 = 35**

A. 32   B. 28   C. 37   D. 44   E. None of these

2. **5 × ? = 735 ÷ 3**

A. 39   B. 59   C. 43   D. 49   E. 53

3. $\frac{4}{7} \times \frac{9}{14} \div \frac{16}{21} \times ? = 1$

A. $\frac{27}{56}$ B. $2\frac{4}{27}$ C. $1\frac{9}{27}$ D. $2\frac{2}{27}$ E. None of these

4. **19% of 250 + ? = 2^7**

A. 85.5   B. 75.5   C. 80.5   D. 70.5   E. None of these

5. **$(6 \times 6 \times 6 \times 6 \times 6)^5 \times (9 \times 9 \times 9)^5 \div (18 \times 18 \times 18)^3 = 2^{16} \times 3^?$**

A. 36   B. 39   C. 37   D. 41   E. 43

6. **50% of $\left(13\frac{1}{10} + 11\frac{1}{10}\right)$ = ?**

A. 16.2   B. 20.1   C. 12.1   D. 6.50   E. None of these

7. **$\sqrt{729} \div 45 \times 720 + ? = 30^2$**

A. 512   B. 468   C. 528   D. 498   E. None of these

8. **$9\frac{3}{8} \times 7\frac{3}{5} \times ? = 15^2$**

A. $2\frac{2}{19}$ B. $4\frac{6}{19}$ C. $4\frac{1}{19}$ D. $3\frac{3}{19}$ E. None of these

9. **600% of $\sqrt{\frac{180 \times 81}{5}} \times 12 \div 3^{-1} = ?^2$**

A. 108   B. 72   C. 144   D. 96   E. None of these

10. $16\frac{2}{3}$% of $(2.8 \times 6 + 5.4 \times 9) = 10^{-1} \times$?

A. 10.7   B. 107   C. 126   D. 119   E. None of these

Correct Answers:

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

Explanations:

1. 61% of 550 − ?% of 250 = 3^5

$$335.5 - ? \times \frac{250}{100} = 243$$

$$335.5 - 243 = ? \times 2.5$$

$$? \times 2.5 = 92.5$$

$$? = 92.5 \times \frac{2}{5} = 37$$

Hence, option C is correct.

2. 5 × ? = 735 ÷ 3

5 × ? = 245

$$? = \frac{245}{5} = 49$$

Hence, option D is correct.

3.

$$\frac{4}{7} \times \frac{9}{14} \div \frac{16}{21} \times \ ? = 1$$

$$\frac{4}{7} \times \frac{9}{14} \times \frac{21}{16} \times \ ? = 1$$

$$? = \frac{14 \times 4}{9 \times 3} = \frac{56}{27} = 2\frac{2}{27}$$

Hence, option D is correct.

4. 19% of 250 + ? = 2^7

19 × 2.5 + ? = 128

? = 128 − 47.5 = 80.5

Hence, option C is correct.

---

5. $(6 × 6 × 6 × 6 × 6)^5 × (9 × 9 × 9)^5 ÷ (18 × 18 × 18)^3 = 2^{16} × 3^?$

$6^{5×5} × \dfrac{9^{5×3}}{18^{3×3}} = 2^{16} × 3^?$

$\dfrac{2^{25} × 3^{25} × 3^{15} × 3^{15}}{2^9 × 3^9 × 3^9} = 2^{16} × 3^?$

$3^{(25 + 15 + 15 − 9 − 9)} = 3^?$

? = 25 + 15 + 15 − 9 − 9 = 37

Hence, option C is correct.

6.

50% of $\left(13\dfrac{1}{10} + 11\dfrac{1}{10}\right) = ?$

$\dfrac{1}{2}$ of $\left(\dfrac{131}{10} + \dfrac{111}{10}\right) = ?$

$? = \dfrac{1}{2}$ of (13.1+ 11.1)

$? = \dfrac{24.2}{2} = 12.1$

Hence, option C is correct.

---

7. $\sqrt{729} ÷ 45 × 720 + ? = 30^2$

$\dfrac{27}{45} × 720 + ? = 900$

? = 900 − 432 = 468

Hence, option B is correct.

8.

$$9\frac{3}{8} \times 7\frac{3}{5} \times ? = 15^2$$

$$\frac{75}{8} \times \frac{38}{5} \times ? = 225$$

$$\frac{15}{4} \times 19 \times ? = 225$$

$$? = \frac{60}{19} = 3\frac{3}{19}$$

Hence, option D is correct.

---

9. 600% of $\sqrt{\frac{180 \times 81}{5}} \times 12 \div 3^{-1} = ?^2$

$6 \times 6 \times 9 \times 12 \times 3 = ?^2$

$? = 3 \times 6 \times 6 = 108$

Hence, option A is correct.

10.

$$16\frac{2}{3}\% \text{ of } (2.8 \times 6 + 5.4 \times 9) = 10^{-1} \times ?$$

$$\frac{50}{300} \times 6\,(2.8 + 3 \times 2.7) = \frac{1}{10} \times ?$$

$$\frac{1}{10} \times ? = 8.1 + 2.8$$

$$? = 10 \times 10.9 = 109$$

Hence, option E is correct.