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

Simplification Quiz 39

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

1. $3\frac{6}{7} \div 33.33\%$ of $162 \times 2\frac{1}{2} = ?$

A. $\frac{5}{14}$

B. $1\frac{1}{14}$

C. $2\frac{5}{7}$

D. $1\frac{5}{7}$

E. None of these

2. 49% of 520 + 51% of 480 = ?

A. 499.6

B. 498.6

C. 502.1

D. 505.8

E. None of these

3. 3.4 × 1.8 ÷ 1.53 + 13.4 = ?

A. 17.8

B. 16.8

C. 17.4

D. 16.4

E. None of these

4. $17\frac{5}{9}$ of $171 - 4\frac{3}{4}$ of $64 = ?$

A. 2588

B. 2698

C. 2794

D. 2928

E. None of these

5. 52.24 + 62.18 + 84.48 + 12.21 = ?

A. 213.21

B. 215.21

C. 211.11

D. 213.11

E. None of these

6. $(1.6)^2 \div (0.8)^2 = [(2.4)^2 \div (0.4)^2] - ?$

A. 24

B. 32

C. 40

D. 36

E. None of these

7. $8\sqrt{8} \times 8^3 \div 8^{-5/2} = 2^?$

A. 24

B. 12

C. 18

D. 21

E. None of these

8. $(0.6)^2 \times 5 = ? - 348 \div 24$

A. 16.3

B. 13.9

C. 15.2

D. 17.2

E. None of these

9. ?% of $(584.2 - 244.2) = (9)^2 + 21$

A. 40

B. 45

C. 30

D. 60

E. None of these

10. $\sqrt{2^?} = (8^2 \times 5^2) \div (200\sqrt{2})$

A. 6

B. 4

C. 5

D. 8

E. None of these

Correct Answers:

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

Explanations:

1.

$$3\frac{6}{7} \div 33.33\% \text{ of } 162 \times 2\frac{1}{2} = ?$$

$$? = \frac{27}{7} \div \frac{1}{3} \text{ of } 162 \times \frac{5}{2}$$

$$? = \frac{27}{7} \times \frac{1}{54} \times \frac{5}{2} = \frac{5}{28}$$

Hence, option E is correct.

2. 49% of 520 + 51% of 480 = ?

$$? = 49 \times \frac{520}{100} + 51 \times \frac{480}{100}$$

? = 254.8 + 244.8 = 499.6

Hence, option A is correct.

Alternate Solution:-

49% of 520 + 51% of 480 = ?
? = 50% of 520 − 1% of 520 + 50% of 480 + 1% of 480
? = 50% of (520 + 480) − 1% of (520 − 480)
? = 500 − 0.4 = 499.6

Hence option A is correct

3. 3.4 × 1.8 ÷ 1.53 + 13.4 = ?

$$? = 3.4 \times \frac{1.8}{1.53} + 13.4$$

$$? = \frac{34 \times 18}{153} + 134$$

? = 4 + 13.4 = 17.4

Hence, option C is correct.

4.

$17\dfrac{5}{9}$ of $171 - 4\dfrac{3}{4}$ of $64 = ?$

$? = \dfrac{158}{9} \times 171 - \dfrac{19}{4} \times 64$

$? = 158 \times 19 - 19 \times 16$

$? = 19\,(158 - 16)$

$? = 142 \times 19 = 2698$

Hence, option B is correct.

5.

$? = 52.24 + 62.18 + 84.48 + 12.21$

$? = 211.11$

Hence, option C is correct.

6.

$(1.6)^2 \div (0.8)^2 = [(2.4)^2 \div (0.4)^2] - ?$

$= \dfrac{1.6 \times 1.6}{0.8 \times 0.8} = \dfrac{2.4 \times 2.4}{0.4 \times 0.4} - ?$

Or, $4 = 36 - ?$

or, $? = 36 - 4 = 32$

Hence, option B is correct.

7.

$8\sqrt{8} \times 8^3 \div 8^{-5/2} = 2^?$

or, $8 \times 8^{1/2} \times 8^3 \div 8^{-5/2} = 2^?$

or, $8^{1+1/2+3+5/2} = 2^?$

or, $2^{3(1+1/2+3+5/2)} = 2^?$

As the bases are equal, we can compare indices,

$\therefore\ ? = 3\left(1 + \dfrac{1}{2} + 3 + \dfrac{5}{2}\right) = \dfrac{3(2+1+6+5)}{2} = \dfrac{3(14)}{2}$

or, $? = 3 \times 7 = 21$

Hence, option D is correct.

8. $(0.6)^2 \times 5 = ? - 348 \div 24$

or, $0.36 \times 5 = ? - 14.5$

or, $? = 14.5 + 1.8 = 16.3$

Hence, option A is correct.

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9. ?% of $(584.4 - 244.2) = (9)^2 + 21$

Or, $\dfrac{? \times 340}{100} = 81 + 21 = 102$

$\therefore \ ? = \dfrac{102 \times 100}{340} = 30$

Hence, option C is correct.

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10. $\sqrt{2^?} = (8^2 \times 5^2) \div (200\sqrt{2})$

$= \dfrac{64 \times 25}{(200\sqrt{2})} = \dfrac{8}{\sqrt{2}} = \dfrac{8}{\sqrt{2}} \times \dfrac{\sqrt{2}}{\sqrt{2}} = 4\sqrt{2}$

$\sqrt{2^?} = \sqrt{2^5}$

$\therefore \ ? = 5$

Hence, option C is correct.