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Approximation Questions for IBPS Clerk Pre, SBI Clerk Pre and RRB Asst. Pre Exams.

Approximation Quiz 30

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

1. $67.96\% \text{ of } 450 - ?\% \text{ of } 150.001 = 212$

- A. 56 B. 63 C. 85 D. 43 E. 76

2. $64\% \text{ of } ? \times \frac{3}{8} = 4584.05$

- A. 19100 B. 19200 C. 19309 D. 20100 E. 20154

3. $(2563.40 + 1564.52 - 846.75) \div 7.94 = ? + 74$

- A. 336 B. 350 C. 378 D. 389 E. 367

4. $(25.03)^2 + (16.93)^2 - (13.06)^2 = ? + 72 \div 9$

- A. 730 B. 737 C. 749 D. 762 E. 771

5. $\sqrt{5775} + \sqrt{?} + 11953 - 4593 = 8563$

- A. 1270129 B. 1271520 C. 1285466 D. 1295746 E. 1285764

6. $[(29.99 + 57.01) \times (44.89 + 81.012)] - (14.99)^2 = ?$

- A. 10595 B. 10689 C. 10737 D. 10862 E. 11540

7. $256.013 + \sqrt{360.99} \div 16.001 \times 415.968 = ?^2 - \sqrt{8280.88}$

- A. 20 B. 22 C. 25 D. 29 E. 38

8. $(134.99 \times 9.01 \times 14400^{1/2}) \div 99.99 = ?$

- A. 1458 B. 1470 C. 1486 D. 1498 E. 1504

9. $48.02\% \text{ of } 1499 + 55\% \text{ of } 2199.98 - ? = 35^2$

- A. 760 B. 705 C. 370 D. 368 E. 367

10. $699.98 \times 39.99 + ?^2 \times 120.12 = 40000$

- A. 6 B. 7 C. 8 D. 9 E. 10

Correct Answers:

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

Explanations:

1.

$$212 \approx 450 \times \frac{68}{100} - ? \times \frac{150}{100}$$

$$? \approx (306 - 212) \times \frac{2}{3} = 94 \times \frac{2}{3} \approx 63$$

Hence, option B is correct.

2.

$$64\% \text{ of } ? \times \frac{3}{8} = 4584.05$$

$$\text{Given } 64\% \text{ of } ? \times \frac{3}{8} = 4584.05$$

$$? = \frac{4584 \times 100 \times 8}{64 \times 3} = 19100$$

Hence, option A is correct.

3.

$$(2563.40 + 1564.52 - 846.75) \div 7.94 = ? + 74$$

$$\approx \frac{2563 + 1565 - 847}{8} = ? + 74$$

$$\Rightarrow \frac{4128 - 847}{8} = ? + 74$$

$$\Rightarrow \frac{3281}{8} = ? + 74$$

$$? = 410.125 - 74$$

$$? \approx 410 - 74$$

$$? = 336$$

Hence, option A is correct

4.

$$(25.03)^2 + (16.93)^2 - (13.06)^2 = ? + 72 \div 9$$

$$\approx 625 + 289 - 169 - 8 = ?$$

$$? = 914 - 177$$

$$? = 737$$

Hence, option B is correct.

5. $\sqrt{5775} + \sqrt{?} + 11953 - 4593 = 8563$
 $\sqrt{?} = 8563 + 4593 - 11953 - \sqrt{5775}$
 $\sqrt{?} = 13156 - 11953 - 76$
 $\sqrt{?} = 1203 - 76 = 1127$
 $\therefore 1127 \times 1127 = 1270129$
Hence, option A is correct.

6. Follow BODMAS rule to solve the equation as per the order given below:
Step 1 Brackets must be solved first, and brackets the BODMAS rule must be followed.
Step 2 Any Mathematical 'of' or 'exponent' must be solved next
Step 3 next the parts of the equation that contain 'division' and 'multiplication' are calculated.
Step 4 Last but not least the parts of the equation that contain 'Addition' and 'Subtraction' should be calculated.

$$[(29.99 + 57.01) \times (44.89 + 81.012)] - (14.99)^2 = ?$$

$$[(30 + 57) \times (45 + 81)] - (15)^2 \approx ?$$

$$87 \times 126 - (15)^2 = ?$$

$$= 87 \times 126 - 225 = ?$$

$$= 10962 - 225 = ?$$

$$? = 10962 - 225 = 10737$$

$$= ? = 10737$$

Hence, option C is correct.

7. $256.013 + \sqrt{360.99} \div 16.001 \times 415.968 = ?^2 - \sqrt{8280.88}$
 $256 + \sqrt{361} \div 16 \times 416 = (?)^2 - \sqrt{8281}$
 $256 + 19 \times 26 = (?)^2 - 91$
 $256 + 494 + 91 = (?)^2$
 $(?)^2 = 841$
 $? = \sqrt{841} = 29$
Hence, option D is correct.

8. $(134.99 \times 9.01 \times 14400^{1/2}) \div 99.99 = ?$
 $? \approx (135 \times 9 \times (14400)^{1/2}) \div 100$
 $= \frac{(135 \times 9) \times 14400^{1/2}}{100}$
 $= \frac{135 \times 9 \times 120}{100}$
 $= \frac{1215 \times 120}{100} = \frac{145800}{100}$
 $= 1458$
Hence, option A is correct.

9. After approximating all the values, the expression becomes
 $\Rightarrow 48\% \text{ of } 1500 + 55\% \text{ of } 2200 - ? = 1225$
 $\Rightarrow 0.48 \times 1500 + 0.55 \times 2200 - ? = 1225$
 $\Rightarrow 1930 - ? = 1225$
 $\Rightarrow ? = 1930 - 1225 = 705$
 $\therefore ? = 705$
Hence, option B is correct.

10. Approximating all the numbers in the above expression:

$$\begin{aligned}\Rightarrow 700 \times 40 + ?^2 \times 120 &= 40000 \\ \Rightarrow 28000 + ?^2 \times 120 &= 40000 \\ \Rightarrow ?^2 \times 120 &= 40000 - 28000 = 12000\end{aligned}$$

$$\Rightarrow ?^2 = \frac{12000}{120} = 100$$

$$\therefore \sqrt{100} = 10$$

Hence, option E is correct.



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