



Date : 17th Nov 2023

Quantitative Aptitude – Simplification

English

Q:1 Add:

$$[9.099 + 999.999 + 000.99 + 999.0000 + 0.909 + 99.0909 + 9090.9]$$

1. 11199.9879
2. 11199.9090
3. 11199
4. 11999.9898

Q:2 The value of $\frac{\sqrt{0.6912} + \sqrt{0.5292}}{\sqrt{0.6912} - \sqrt{0.5292}}$ is -----.

1. 1.5
2. 0.9
3. 15
4. 9

Q:3 The value of $3 \times 2 \div 3$ of $12 - 3 \div 2 \times (2 - 3) \times 2 + 3 \div 2$ is:

1. $7/3$
2. $-7/3$
3. $-14/3$
4. $14/3$

Q:4 What will come in the place of question mark (?) in the following:

$$3\frac{1}{3} + 2\frac{1}{2} - \frac{3}{8} \text{ of } 6\frac{2}{3} = ?$$

1. $\frac{5}{3}$
2. $\frac{10}{3}$
3. $\frac{3}{5}$
4. $\frac{-3}{5}$

Q:5 Find the value of '?':

$$(1369)^{1/2} - (2197)^{1/3} + 276 - ?^2 = (4225)^{1/2} + 171$$

1. 12
2. 8
3. 10
4. 9

Q:6 Find the value of $[(0.04)^{-1.5} + (0.16)^{-1.5}]$.

1. 125
2. 150.225
3. 125.25
4. 140.625

Q:7 Simplify -

$$(27 \times 4)/5 + (19/4) \times 15 + (82/25) \times 17 = ?$$

1. 132.08
2. 152.96
3. 148.61
4. 139.85

Q:8 What value will come in place of question mark (?) in the following question?

$$[(1152 \div 80 \times 2.5)^{1/2} + (414 \div 23)^2] = (?)^3 + 114$$

1. 6
2. 5
3. 8
4. 7

Q:9 Simplify:

$$10^3 + 8^3 + 12^2 - 11^2 + 17^2 + 19^2 + 24^2 + 13^2 + 18^2$$

1. 2772
2. 21344
3. 1892
4. 3254

Q:10 What should come in place of the question mark (?) in the following question?

$$(48\% \text{ of } 5680) - (38\% \text{ of } 7890) = ?$$

1. -265.8
2. -271.8
3. -241.3
4. -289.5



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Answer Key

1. (1)	2. (3)	3. (4)	4. (2)	5. (2)
6. (4)	7. (3)	8. (1)	9. (4)	10. (2)

Answers and Solutions

Q:1 The correct answer is **option 1** i.e. **11199.9879**

$$\Rightarrow [9.099 + 999.999 + 000.99 + 999.0000 + 0.909 + 99.0909 + 9090.9]$$

$$\text{Before Decimal point} = 9 + 999 + 000 + 999 + 0 + 99 + 9090 = 11196$$

$$\text{After Decimal point} = 0990 + 9990 + 9900 + 0000 + 9090 + 0909 + 9000 = 39879 \text{ [after decimal point maximum 4 digit, so all number must be 4 digit, put zero/zeros to make 4 digits]}$$

Now In after decimal point section put decimal point after 4 digit (maximum after point), count from unit place

$$= 3.9879$$

$$\text{Now Add the results} = 11196 + 3.9879 = 11199.9879$$

Q:2 The correct answer is **option 3** i.e. **15**

$$\sqrt{0.6912} + \sqrt{0.5292}$$

$$\sqrt{0.6912} - \sqrt{0.5292}$$

$$\Rightarrow [(\sqrt{0.12} \times \sqrt{5.76}) + (\sqrt{0.12} \times \sqrt{4.41})] / [(\sqrt{0.12} \times \sqrt{5.76}) - (\sqrt{0.12} \times \sqrt{4.41})]$$

$$\Rightarrow [2.4 + 2.1] / [2.4 - 2.1]$$

$$\Rightarrow 4.5 / 0.3$$

$$\Rightarrow 15$$

Q:3 The correct answer is **option 4** i.e. **14/3**.

$$3 \times 2 \div 3 \text{ of } 12 - 3 \div 2 \times (2 - 3) \times 2 + 3 \div 2$$

$$\Rightarrow 3 \times 2 \div 3 \text{ of } 12 - 3 \div 2 \times -1 \times 2 + 3 \div 2$$

$$\Rightarrow 3 \times 2 \div 36 - 3 \div 2 \times -1 \times 2 + 3 \div 2$$

$$\Rightarrow 3 \times (2/36) - (3/2) \times -1 \times 2 + 3/2$$

$$\Rightarrow 1/6 + 3 + 3/2 = 14/3$$

Q:4 The correct answer is **option 2** i.e. $\frac{10}{3}$ **Concept**

Used:

BODMAS rule.

Explanation:

According to the given question,

$$3\frac{1}{3} + 2\frac{1}{2} - \frac{3}{8} \text{ of } 6\frac{2}{3}$$

$$\Rightarrow \frac{10}{3} + \frac{5}{2} - \frac{3}{8} \times \frac{20}{3}$$

$$\Rightarrow \frac{10}{3} + \frac{5}{2} - \frac{5}{2}$$

$$\Rightarrow \frac{10}{3}$$

Hence, the required value is $\frac{10}{3}$

Q:5 The correct answer is **Option 2** i.e. **8**

$$(1369)^{1/2} - (2197)^{1/3} + 276 - ?^2 = (4225)^{1/2} + 171$$

$$\Rightarrow 37 - 13 + 276 - ?^2 = 65 + 171$$

$$\Rightarrow 24 + 276 - (?^2) = 236$$

$$\Rightarrow 300 - 236 = (?^2)$$

$$\Rightarrow ? = 8$$

Q:6 The correct answer is **Option 4** i.e. **140.625**.

$$\Rightarrow [(0.04)^{-1.5} + (0.16)^{-1.5}]$$

$$\Rightarrow [(1/0.04)^{1.5} + (1/0.16)^{1.5}]$$

$$\Rightarrow [(100/4)^{1.5} + (100/16)^{1.5}]$$

$$\Rightarrow [\{(10/2)^2\}^{1.5} + \{(10/4)^2\}^{1.5}]$$

$$\Rightarrow [\{(10/2)^2\}^{3/2} + \{(10/4)^2\}^{3/2}]$$

$$\Rightarrow [10/2 \times 3/2 + 10/4 \times 3/2]$$

$$\Rightarrow [(10/2)^3 + (10/4)^3]$$

$$\Rightarrow [(1000/8) + (1000/64)]$$

$$\Rightarrow [125 + 15.625]$$

$$\Rightarrow 140.625$$

Q:7 The correct answer is **Option 3** i.e. **148.61**.

$$\Rightarrow (27 \times 4)/5 + (19/4) \times 15 + (82/25) \times 17 = ?$$

$$\Rightarrow 108/5 + 4.75 \times 15 + 3.28 \times 17 = ?$$

$$\Rightarrow 21.6 + 71.25 + 55.76 = ?$$

$$\Rightarrow ? = 148.61$$

Q:8 The correct answer is **option 1** i.e. **6**

$$[(1152 \div 80 \times 2.5)^{1/2} + (414 \div 23)^2] = (?^3) + 114$$

Applying BODMAS Rule;

$$\Rightarrow [(14.4 \times 2.5)^{1/2} + (18)^2] = (?^3) + 114$$

$$\Rightarrow [(36)^{1/2} + (18)^2] = (?^3) + 114$$

$$\Rightarrow (6 + 324) = ?^3 + 114$$

$$\Rightarrow 330 = ?^3 + 114$$

$$\Rightarrow ?^3 = 216$$

$$\Rightarrow ? = 6$$

Q:9 The correct answer is **Option 4** i.e. **3254**.

$$10^3 + 8^3 + 12^2 - 11^2 + 17^2 + 19^2 + 24^2 + 13^2 + 18^2$$

We know that,

$$\Rightarrow 10^3 = 1000$$

$$\Rightarrow 8^3 = 512$$

$$\Rightarrow 12^2 = 144$$

$$\Rightarrow 11^2 = 121$$

$$\Rightarrow 17^2 = 289$$



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$$\Rightarrow 19^2 = 361$$

$$\Rightarrow 24^2 = 576$$

$$\Rightarrow 13^2 = 169$$

$$\Rightarrow 18^2 = 324$$

Now,

$$\Rightarrow 10^3 + 8^3 + 12^2 - 11^2 + 17^2 + 19^2 + 24^2 + 13^2 + 18^2$$

$$\Rightarrow 1000 + 512 + 144 - 121 + 289 + 361 + 576 + 169 + 324$$

$$\Rightarrow (3375 - 121) = 3254$$

Q:10 The correct answer is **Option 2** i.e. **-271.8**.

$$\Rightarrow (48\% \text{ of } 5680) - (38\% \text{ of } 7890) = ?$$

$$\Rightarrow [48(5680)/100] - [38(7890)/100] = ?$$

$$\Rightarrow ? = 2726.4 - 2998.2$$

$$\Rightarrow ? = -271.8$$

