









Mastering Precision: A Practice Set on Approximation for Mathematical Excellence

Welcome to our practice question session on the intriguing topic of approximation!

In this blog, we will delve into a series of thought-provoking exercises designed to sharpen your skills and deepen your understanding of approximation techniques. Get ready to put your mathematical prowess to the test as we explore realworld scenarios where approximation plays a crucial role.

These practice questions will not only challenge you but also provide valuable insights into the practical applications of approximation in various fields. So, grab a pen and paper, and let's embark on this exciting journey of problem-solving and numerical approximation!

Direction: What approximate value will come in the place of question mark (?) in the following question no. 1 to 10?

$$1.839 \div 23.99 + 523 \div ? + 135.94 - 101.03 = 105$$

1. 18

2. 25

3.16

4.15

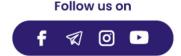
2.
$$(2120 \div \sqrt{2809}) \times 12.497 + 3636 \div 72 = ?$$

1.520

2.550

3.400

4.750



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3. $(?)^{0.5}$ = 45.02% of 849.9 - 30.09% of 990.89

1.7225

2. 622

3. 4225

4. 7575

4. $[(8124 + 1312 - 9040) - (19.982 \times 13.01)] \div 3.975 = ?$

1. 34

2. 40

3. 42

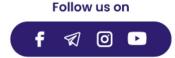
4. 37

5. $(2)^{?+2} = (511.79)/(31.89) \times (64.03)/(127.95) \times 8.01$

1. 2

2. 3

3. 5



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4. 4

6. $198.14 \times 153.95 \div 76.77 + 177.94 - 294.77 = ?$

1.265

2.263

3.213

4. 279

7. $120.09 \div 14.88 \times 23.03 - 20.94 \times 3.96 = ?$

1.142

2.100

3. 144

4.178

8. 11.87% of 1200 - ? \times 13.8/ $\sqrt{195}$ \times 21.02 = -256

1.7



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2. -19

3. 15

4. 19

9. $(64.01)^2 \times (65)^{1/3} \times (25.99)^2 \div \{2^{11} \times (12.97)^2\} = 2^7$

1.4

2. 5

3. 2

4. 13

10. 85% of 620.028 + ?% of 480.15 = 70% of 890.135

1.10%

2.20%

3.35%

4.40%















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Solutions:

Taking the approximate values;

$$840 \div 24 + 523 \div ? + 136 - 101 = 105$$

$$523 \div ? = 105 - 136 + 101 - 35 = 35$$

$$? = 523 \div 35$$

$$? = 14.9 = 15$$

2.
$$(2120 \div \sqrt{2809}) \times 12.497 + 3636 \div 72 = ?$$

$$\Rightarrow$$
 (2120 ÷ 53) × 12.497 + 50.5 = ?

Taking the approximate values;

$$\Rightarrow$$
 40 × 12.5 + 50 = ?

$$\Rightarrow$$
 500 + 50 = ? \Rightarrow ? = 550

3.
$$X^{0.5} = 45.02\%$$
 of 849.9 - 30.09% of 990.89

By approximation,

45.02 as 45, 849.9 as 850, 30.09 as 30, 990.89 as 991

$$X^{0.5} = 45\%$$
 of 850 - 30% of 991 = 382.5 - 297.3 = 85.2

taking $X^{0.5}$ = 85 approximately

$$X = 85^2 = 7225$$

4.
$$[(8124 + 1312 - 9040) - (19.982 \times 13.01)] \div 3.975 = ?$$

Taking the approximate values;

$$\Rightarrow$$
 [396 – (20 × 13)] ÷ 4 = ?

$$\Rightarrow$$
 [396 – 260] ÷ 4 = ? \Rightarrow 136 ÷ 4 = ? \Rightarrow ? = 34

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5.
$$(2)^{?+2} = (511.79)/(31.89) \times (64.03)/(127.95) \times 8.01$$

Taking the approximate values;

$$(2)^{?+2} = 512/32 \times 64/128 \times 8$$

$$(2)^{?+2} = 16 \times 1/2 \times 8$$

$$(2)^{?+2} = 64$$

$$(2)^{?+2} = 2^6 \Rightarrow ? = 4$$

Taking the approximate values;

$$\Rightarrow$$
 198 × 154 ÷ 77 + 178 – 295 = ?

$$\Rightarrow$$
 198 × 2 + 178 – 295 = ?

$$\Rightarrow$$
 396 + 178 - 295 = ? \Rightarrow ? = 279

7.
$$? = 120.09 \div 14.88 \times 23.03 - 20.94 \times 3.96$$

Taking the approximate values;

$$? = 120 \div 15 \times 23 - 21 \times 4$$

$$? = 8 \times 23 - 21 \times 4$$

$$? = 184 - 84 = 100$$

8. 11.87% of 1200 - ?
$$\times$$
 13.8/ $\sqrt{195}$ \times 21.02 = -256

Taking the approximate values;

12% of 1200 - ? ×
$$14/\sqrt{196}$$
 × 21 = -256

$$(12/100) \times 1200 - ? \times 14/14 \times 21 = -256$$

$$144 - ? \times 1 \times 21 = -256$$

$$144 + 256 = 21 \times ?$$

$$399 = 21 \times ?$$

9.
$$(64.01)^2 \times (65)^{1/3} \times (25.99)^2 \div \{2^{11} \times (12.97)^2\} = 2^7$$

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Taking the approximate values;

$$(64)^2 \times (64)^{1/3} \times (26)^2 \div \{2^{11} \times (13)^2\} = 2^?$$

$$64 \times 64 \times (4^3)^{1/3} \times 26 \times 26 \div 2^{11} \times (13)^2 = 2^7$$

$$2^6 \times 2^6 \times 4 \times 26 \times 26/2^{11} \times 13 \times 13 = 2^7$$

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

$$2^5 = 2^?$$

10. 85% of 620.028 + ?% of 480.15 = 70% of 890.135

Taking the approximate values;

85% of 620 + ?% of 480 = 70% of 890

$$527 + ? \times 480 \div 100 = 623$$

$$? \times 4.8 = 623 - 527$$