

Decimals and Irrational Numbers

MCQ Test, Set 01

Time: 30 minutes

Maximum marks: 25

Name: _____ Class: _____ Date: _____

- There are 25 questions. Each has exactly one correct answer: choose A, B, C or D.
- Each correct answer carries 1 mark. There is no negative marking.
- The key sheet and worked solutions are at the end of this test.

- $\frac{23}{1000} =$
A. 2.3 **B.** 0.23 **C.** 0.0023 **D.** 0.023
- $\frac{5.72}{1000} =$
A. 0.000572 **B.** 0.0572 **C.** 0.572 **D.** 0.00572
- $8.207 \times 100 =$
A. 820.7 **B.** 82.07 **C.** 8.207 **D.** 8207
- $4.36 \times \square = 4360$. The number in the box is
A. 1000 **B.** 10 **C.** 10000 **D.** 100
- 0030.0400 is equal to
A. 3.4 **B.** 3.04 **C.** 30.4 **D.** 30.04
- $300 + 5 + \frac{2}{10} + \frac{9}{1000} =$
A. 35.209 **B.** 305.29 **C.** 305.209 **D.** 35.29
- The place value of 6 in 25.463 is
A. $\frac{6}{100}$ **B.** $\frac{6}{10}$ **C.** 6 **D.** $\frac{6}{1000}$
- Without actual division, $\frac{7}{8} =$
A. 0.875 **B.** 8.75 **C.** 0.0875 **D.** 1.75
- By the division method, $\frac{15}{8} =$
A. 1.7 **B.** 1.875 **C.** 18.75 **D.** 0.1875
- Which of these fractions is a terminating decimal?
A. $\frac{3}{14}$ **B.** $\frac{9}{25}$ **C.** $\frac{5}{6}$ **D.** $\frac{4}{9}$
- $\frac{4}{11}$ in decimal form is
A. $0.\overline{4}$ **B.** 2.75 **C.** $0.\overline{63}$ **D.** $0.\overline{36}$

12. 0.45 as a rational number in simplest form is

A. $\frac{9}{20}$

B. $\frac{9}{25}$

C. $\frac{9}{200}$

D. $\frac{9}{2}$

13. In the form $\frac{p}{q}$, $0.\overline{4} =$

A. $\frac{2}{5}$

B. $\frac{4}{99}$

C. $\frac{2}{45}$

D. $\frac{4}{9}$

14. $0.2\overline{3} =$

A. $\frac{23}{99}$

B. $\frac{7}{33}$

C. $\frac{23}{90}$

D. $\frac{7}{30}$

15. Add 26.48 and 3.7.

A. 29.18

B. 30.18

C. 26.85

D. 3.018

16. Subtract 27.58 from 64.3.

A. 43.28

B. -36.72

C. 36.72

D. 3.672

17. $0.4 \times 0.7 =$

A. 0.28

B. 2.8

C. 0.028

D. 28

18. Find 1.6×2.45 .

A. 1.715

B. 0.392

C. 3.92

D. 39.2

19. $(0.3)^3 =$

A. 0.0027

B. 0.9

C. 0.027

D. 0.27

20. $6.18 \div 6 =$

A. 10.3

B. 1.03

C. 1.3

D. 0.103

21. $0.06 \div 0.003 =$

A. 2

B. 200

C. 0.2

D. 20

22. $\frac{0.4 \times 0.6}{0.08} =$

A. 0.3

B. 3

C. 0.03

D. 30

23. $\frac{1}{4} + \frac{3}{5} + \frac{3}{25} =$ (decimal form)

A. 0.097

B. 9.7

C. 0.97

D. 97

24. If $3.25 \times 0.8 = 2.6$, then $325 \times 0.8 =$

A. 2600

B. 2.6

C. 260

D. 26

25. The product of two decimals is 6.042. One of them is 1.9. The other is

A. 0.0318

B. 3.18

C. 31.8

D. 0.318

Key sheet

1. D	2. D	3. A	4. A	5. D
6. C	7. A	8. A	9. B	10. B
11. D	12. A	13. D	14. D	15. B
16. C	17. A	18. C	19. C	20. B
21. D	22. B	23. C	24. C	25. B

Solutions

1. $\frac{23}{1000} =$

1000 has 3 zeros: move the point 3 places to the left.

$$\frac{23}{1000} = 0.023$$

Ans: (D) 0.023

2. $\frac{5.72}{1000} =$

Dividing by 1000: move the point 3 places to the left.

$$\frac{5.72}{1000} = 0.00572$$

Ans: (D) 0.00572

3. $8.207 \times 100 =$

Multiplying by 100: move the point 2 places to the right.

$$8.207 \times 100 = 820.7$$

Ans: (A) 820.7

4. $4.36 \times \square = 4360$. The number in the box is

The point moved 3 places to the right, so we multiplied by 1000.

Ans: (A) 1000

5. 0030.0400 is equal to

Only the zeros in front of the whole part and at the end of the decimal part can be removed.

Zeros in the middle stay: $0030.0400 = 30.04$

Ans: (D) 30.04

6. $300 + 5 + \frac{2}{10} + \frac{9}{1000} =$

Write each digit in its place and put 0 where a place is missing.

Hundreds 3, tens 0, ones 5, tenths 2, hundredths 0, thousandths 9

$$= 305.209$$

Ans: (C) 305.209

7. The place value of 6 in 25.463 is

6 is in the hundredths place of 25.463.

$$\text{Place value} = \frac{6}{100}$$

Ans: (A) $\frac{6}{100}$

8. Without actual division, $\frac{7}{8} =$

$$\frac{7}{8} = \frac{7 \times 5 \times 5 \times 5}{2 \times 2 \times 2 \times 5 \times 5 \times 5}$$

$$= \frac{875}{10 \times 10 \times 10} = \frac{875}{1000} = 0.875$$

Ans: (A) 0.875

9. By the division method, $\frac{15}{8} =$

$$15 - 8 = 7, 70 - 64 = 6, 60 - 56 = 4, 40 - 40 = 0$$

$$\therefore \frac{15}{8} = 1.875$$

The first remainder 7 is not the decimal part: keep dividing.

Ans: (B) 1.875

10. Which of these fractions is a terminating decimal?

$25 = 5 \times 5$: only 2s and 5s, so it terminates.

Each of the others has a factor other than 2 and 5 in its denominator (simplest form).

Ans: (B) $\frac{9}{25}$

11. $\frac{4}{11}$ in decimal form is

$40 - 33 = 7, 70 - 66 = 4$: the remainder repeats.

$$\frac{4}{11} = 0.363636 \dots = 0.\overline{36}$$

Ans: (D) $0.\overline{36}$

12. 0.45 as a rational number in simplest form is

$$0.45 = \frac{45}{100} = \frac{9}{20}$$

Ans: (A) $\frac{9}{20}$

13. In the form $\frac{p}{q}$, $0.\overline{4} =$

$$10x = 4.444444 \dots, x = 0.444444 \dots$$

$$(-) 9x = 4, x = \frac{4}{9}$$

Ans: (D) $\frac{4}{9}$

14. $0.2\overline{3} =$

$$100x = 23.333333 \dots, 10x = 2.333333 \dots$$

$$(-) 90x = 21, x = \frac{21}{90} = \frac{7}{30}$$

(Short method: $\frac{23-2}{90}$)

Ans: (D) $\frac{7}{30}$

15. Add 26.48 and 3.7.

Keep the decimal points in one line:

$$\begin{array}{r} 26.48 \\ + 3.70 \\ \hline 30.18 \end{array}$$

Ans: (B) 30.18

16. Subtract 27.58 from 64.3.

Keep the decimal points in one line (fill zeros):

$$\begin{array}{r} 64.30 \\ - 27.58 \\ \hline 36.72 \end{array}$$

Subtract 27.58 from 64.3 means $64.3 - 27.58$.

Ans: (C) 36.72

17. $0.4 \times 0.7 =$

Multiply without the points: $4 \times 7 = 28$

Decimal places: $1 + 1 = 2$

$$0.4 \times 0.7 = 0.28$$

Ans: (A) 0.28

18. Find 1.6×2.45 .

Multiply without the points: $16 \times 245 = 3920$

Decimal places: $1 + 2 = 3$

$$1.6 \times 2.45 = 3.920 = 3.92$$

Ans: (C) 3.92

19. $(0.3)^3 =$

$$(0.3)^3 = 0.3 \times 0.3 \times 0.3$$

$3 \times 3 \times 3 = 27$; decimal places $1 + 1 + 1 = 3$

$$(0.3)^3 = 0.027 \text{ (not } 0.3 \times 3)$$

Ans: (C) 0.027

20. $6.18 \div 6 =$

$$\frac{6.18}{6} = \frac{618}{100 \times 6}$$

$$618 \div 6 = 103$$

$$= \frac{103}{100} = 1.03$$

Ans: (B) 1.03

21. $0.06 \div 0.003 =$

$$\frac{0.06}{0.003} = \frac{0.06 \times 1000}{0.003 \times 1000} = \frac{60}{3}$$

$$60 \div 3 = 20$$

Ans: (D) 20

22. $\frac{0.4 \times 0.6}{0.08} =$

$$0.4 \times 0.6 = 0.24$$

$$\frac{0.24}{0.08} = \frac{24}{8} = 3$$

Ans: (B) 3

23. $\frac{1}{4} + \frac{3}{5} + \frac{3}{25} =$ (decimal form)

LCM of 4, 5, 25 is 100.

$$\frac{1}{4} + \frac{3}{5} + \frac{3}{25} = \frac{25+60+12}{100} = \frac{97}{100} \\ = 0.97$$

Ans: (C) 0.97

24. If $3.25 \times 0.8 = 2.6$, then $325 \times 0.8 =$

$$325 = 3.25 \times 100$$

$$\text{So } 325 \times 0.8 = 2.6 \times 100 = 260$$

Ans: (C) 260

25. The product of two decimals is 6.042. One of them is 1.9. The other is

$$x = \frac{6.042}{1.9} = \frac{60.42}{19} \\ = 3.18$$

$$\text{Check: } 3.18 \times 1.9 = 6.042$$

Ans: (B) 3.18
