

Decimals and Irrational Numbers

MCQ Test, Set 04

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.

- $\frac{615}{10000} =$
A. 0.615 **B.** 6.15 **C.** 0.00615 **D.** 0.0615
- $\frac{27.05}{10} =$
A. 0.02705 **B.** 2.705 **C.** 0.2705 **D.** 27.05
- $0.0061 \times 100 =$
A. 61 **B.** 6.1 **C.** 0.061 **D.** 0.61
- $0.00804 \times \square = 80.4$. The number in the box is
A. 100 **B.** 1000 **C.** 100000 **D.** 10000
- 000400.0010 is equal to
A. 400.01 **B.** 400.001 **C.** 40.001 **D.** 4.001
- $6000 + 8 + \frac{6}{100} =$
A. 6008.06 **B.** 68.6 **C.** 6008.6 **D.** 68.06
- In 643.18, the place value of 4 is
A. 4 **B.** 400 **C.** $\frac{4}{10}$ **D.** 40
- In decimal form, $\frac{9}{4}$ is
A. 22.5 **B.** 2.25 **C.** 0.225 **D.** 2.1
- By the division method, $\frac{33}{20} =$
A. 16.5 **B.** 0.165 **C.** 1.65 **D.** 1.13
- Which fraction below has a terminating decimal form? (Use its simplest form.)
A. $\frac{9}{24}$ **B.** $\frac{3}{70}$ **C.** $\frac{11}{60}$ **D.** $\frac{7}{30}$
- $\frac{1}{6}$ in decimal form is
A. $0.1\overline{6}$ **B.** $0.\overline{6}$ **C.** 6 **D.** $0.\overline{1}$

12. 1.6 as a rational number in simplest form is

A. $\frac{5}{8}$

B. $\frac{4}{25}$

C. $\frac{8}{5}$

D. $\frac{6}{5}$

13. If $x = 0.\overline{09}$, then $100x - x$ is equal to

A. 9

B. 9.09

C. 0.09

D. 99

14. $0.0\overline{7} =$

A. $\frac{7}{99}$

B. $\frac{7}{90}$

C. $\frac{7}{900}$

D. $\frac{7}{9}$

15. Add 0.58 and 6.247.

A. 6.305

B. 6.827

C. 6.727

D. 0.6827

16. Subtract 2.367 from 8.05.

A. 6.317

B. 0.5683

C. -5.683

D. 5.683

17. The product 0.25×0.04 is

A. 1

B. 0.1

C. 0.01

D. 0.001

18. Find 4.8×1.25 .

A. 1.5

B. 60

C. 6

D. 0.6

19. $(1.3)^2 =$

A. 1.69

B. 0.169

C. 16.9

D. 2.6

20. $0.0927 \div 9 =$

A. 0.0103

B. 0.103

C. 0.013

D. 0.00103

21. $4.8 \div 0.04 =$

A. 1.2

B. 1200

C. 120

D. 12

22. The value of $0.3 \times 0.2 + 0.4 \times 0.2$ is

A. 0.014

B. 14

C. 1.4

D. 0.14

23. In decimal form, $\frac{1}{8} + \frac{3}{5} + \frac{1}{4}$ is

A. 0.0975

B. 97.5

C. 9.75

D. 0.975

24. If $6.4 \times 1.5 = 9.6$, then $0.64 \times 15 =$

A. 0.096

B. 96

C. 9.6

D. 0.96

25. $3.7 \times x = 1.4652$. Then $x =$

A. 39.6

B. 0.396

C. 0.0396

D. 3.96

Key sheet

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

Solutions

1. $\frac{615}{10000} =$

10000 has 4 zeros: move the point 4 places to the left.

$$\frac{615}{10000} = 0.0615$$

Ans: (D) 0.0615

2. $\frac{27.05}{10} =$

Dividing by 10: move the point 1 place to the left.

$$\frac{27.05}{10} = 2.705$$

Ans: (B) 2.705

3. $0.0061 \times 100 =$

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

$$0.0061 \times 100 = 0.61$$

Ans: (D) 0.61

4. $0.00804 \times \square = 80.4$. The number in the box is

The point moved 4 places to the right, so we multiplied by 10000.

Ans: (D) 10000

5. 000400.0010 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: $000400.0010 = 400.001$

Ans: (B) 400.001

6. $6000 + 8 + \frac{6}{100} =$

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

Thousands 6, hundreds 0, tens 0, ones 8, tenths 0, hundredths 6

$$= 6008.06$$

Ans: (A) 6008.06

7. In 643.18, the place value of 4 is

4 is in the tens place of 643.18.

Place value = 40

Ans: (D) 40

8. In decimal form, $\frac{9}{4}$ is

$$\begin{aligned}\frac{9}{4} &= \frac{9 \times 5 \times 5}{2 \times 2 \times 5 \times 5} \\ &= \frac{225}{10 \times 10} = \frac{225}{100} = 2.25\end{aligned}$$

Ans: (B) 2.25

9. By the division method, $\frac{33}{20} =$

$$33 - 20 = 13, 130 - 120 = 10, 100 - 100 = 0$$

$$\therefore \frac{33}{20} = 1.65$$

The first remainder 13 is not the decimal part: keep dividing.

Ans: (C) 1.65

10. Which fraction below has a terminating decimal form? (Use its simplest form.)

$$\frac{9}{24} = \frac{3}{8}, \text{ and } 8 = 2 \times 2 \times 2: \text{ only 2s and 5s, so it terminates.}$$

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

Ans: (A) $\frac{9}{24}$

11. $\frac{1}{6}$ in decimal form is

$$10 - 6 = 4, 40 - 36 = 4: \text{ the remainder repeats.}$$

$$\frac{1}{6} = 0.166666\ldots = 0.1\overline{6}$$

Ans: (A) $0.1\overline{6}$

12. 1.6 as a rational number in simplest form is

$$1.6 = \frac{16}{10} = \frac{8}{5}$$

Ans: (C) $\frac{8}{5}$

13. If $x = 0.\overline{09}$, then $100x - x$ is equal to

$$100x = 9.090909\ldots, x = 0.090909\ldots$$

Subtracting, the repeating parts cancel: $100x - x = 9$

Ans: (A) 9

14. $0.0\overline{7} =$

$$100x = 7.777777\ldots, 10x = 0.777777\ldots$$

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

(Short method: $\frac{7-0}{90}$)

Ans: (B) $\frac{7}{90}$

15. Add 0.58 and 6.247.

Keep the decimal points in one line:

$$\begin{array}{r} 0.580 \\ + 6.247 \\ \hline 6.827 \end{array}$$

Ans: (B) 6.827

16. Subtract 2.367 from 8.05.

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

$$\begin{array}{r} 8.050 \\ - 2.367 \\ \hline 5.683 \end{array}$$

Subtract 2.367 from 8.05 means $8.05 - 2.367$.

Ans: (D) 5.683

17. The product 0.25×0.04 is

Multiply without the points: $25 \times 4 = 100$

Decimal places: $2 + 2 = 4$

$$0.25 \times 0.04 = 0.0100 = 0.01$$

Ans: (C) 0.01

18. Find 4.8×1.25 .

Multiply without the points: $48 \times 125 = 6000$

Decimal places: $1 + 2 = 3$

$$4.8 \times 1.25 = 6.000 = 6$$

Ans: (C) 6

19. $(1.3)^2 =$

$$(1.3)^2 = 1.3 \times 1.3$$

$13 \times 13 = 169$; decimal places $1 + 1 = 2$

$$(1.3)^2 = 1.69 \text{ (not } 1.3 \times 2)$$

Ans: (A) 1.69

20. $0.0927 \div 9 =$

$$\frac{0.0927}{9} = \frac{927}{10000 \times 9}$$

$$927 \div 9 = 103$$

$$= \frac{103}{10000} = 0.0103$$

Ans: (A) 0.0103

21. $4.8 \div 0.04 =$

$$\frac{4.8}{0.04} = \frac{4.8 \times 100}{0.04 \times 100} = \frac{480}{4}$$

$$480 \div 4 = 120$$

Ans: (C) 120

22. The value of $0.3 \times 0.2 + 0.4 \times 0.2$ is

$$0.3 \times 0.2 = 0.06, 0.4 \times 0.2 = 0.08$$

$$0.06 + 0.08 = 0.14$$

Ans: (D) 0.14

23. In decimal form, $\frac{1}{8} + \frac{3}{5} + \frac{1}{4}$ is

LCM of 8, 5, 4 is 40.

$$\frac{1}{8} + \frac{3}{5} + \frac{1}{4} = \frac{5+24+10}{40} = \frac{39}{40} \\ = 0.975$$

Ans: (D) 0.975

24. If $6.4 \times 1.5 = 9.6$, then $0.64 \times 15 =$

$$0.64 = 6.4 \div 10 \text{ and } 15 = 1.5 \times 10$$

The changes cancel: $0.64 \times 15 = 9.6$

Ans: (C) 9.6

25. $3.7 \times x = 1.4652$. Then $x =$

$$x = \frac{1.4652}{3.7} = \frac{14.652}{37} \\ = 0.396$$

Check: $0.396 \times 3.7 = 1.4652$

Ans: (B) 0.396
