

Decimals and Irrational Numbers

MCQ Test, Set 03

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.

- $\frac{85}{100000}$ written as a decimal is
A. 0.000085 **B.** 0.085 **C.** 0.0085 **D.** 0.00085
- $148.9 \times \frac{1}{100} =$
A. 0.1489 **B.** 1.489 **C.** 0.01489 **D.** 14.89
- 45.2×10000 is equal to
A. 45200 **B.** 4520000 **C.** 452000 **D.** 4520
- $15.9 \times \square = 15900$. The number in the box is
A. 10 **B.** 100 **C.** 1000 **D.** 10000
- Removing the unnecessary zeros, $00.05000 =$
A. 0.5 **B.** 0.05 **C.** 0.005 **D.** 5
- $40 + \frac{7}{10} + \frac{5}{1000}$ is the expanded form of
A. 4.705 **B.** 4.75 **C.** 40.75 **D.** 40.705
- In 47.0825, the digit in the thousandths place is
A. 2 **B.** 8 **C.** 5 **D.** 7
- $2\frac{5}{8}$ in decimal form is
A. 2.625 **B.** 0.625 **C.** 26.25 **D.** 2.58
- $45 \div 16 =$
A. 28.125 **B.** 0.28125 **C.** 2.13 **D.** 2.8125
- Without actual division, which fraction can be written as a terminating decimal?
A. $\frac{5}{21}$ **B.** $\frac{2}{15}$ **C.** $\frac{13}{80}$ **D.** $\frac{1}{36}$
- $\frac{2}{3} =$
A. $0.\overline{3}$ **B.** 1.5 **C.** $0.\overline{2}$ **D.** $0.\overline{6}$

12. In the form $\frac{p}{q}$, $0.016 =$
- A. $\frac{1}{625}$ B. $\frac{4}{25}$ C. $\frac{16}{125}$ D. $\frac{2}{125}$
-
13. $1.\overline{3}$ as a fraction in simplest form is
- A. $\frac{4}{3}$ B. $\frac{13}{9}$ C. $\frac{1}{3}$ D. $\frac{13}{10}$
-
14. In the form $\frac{p}{q}$, $1.3\overline{8}$ is
- A. $\frac{23}{15}$ B. $\frac{125}{99}$ C. $\frac{25}{18}$ D. $\frac{46}{33}$
-
15. The sum of 148.3 and 27.65 is
- A. 175.95 B. 165.95 C. 17.595 D. 42.48
-
16. Find $100 - 37.46$.
- A. 137.46 B. 62.54 C. 6.254 D. 625.4
-
17. $1.3 \times 0.05 =$
- A. 0.65 B. 0.065 C. 0.0065 D. 6.5
-
18. The product of 0.53 and 0.42 is
- A. 0.02226 B. 0.0318 C. 0.2226 D. 2.226
-
19. $(0.04)^2$ is equal to
- A. 0.016 B. 0.0016 C. 0.08 D. 0.00016
-
20. When 2.45 is divided by 5, the answer is
- A. 0.49 B. 49 C. 4.9 D. 0.049
-
21. The value of $\frac{0.15}{0.05}$ is
- A. 3 B. 0.3 C. 30 D. 0.03
-
22. $\frac{0.064 - 0.016}{0.08} =$
- A. 6 B. 0.06 C. 0.6 D. 60
-
23. $\frac{2}{5} + \frac{1}{4} + \frac{7}{25} =$ (decimal form)
- A. 0.093 B. 9.3 C. 93 D. 0.93
-
24. If $23 \times 47 = 1081$, then $2.3 \times 0.47 =$
- A. 10.81 B. 1.081 C. 0.1081 D. 0.01081
-
25. The product of two decimals is 28.35. One of them is 6.3. The other is
- A. 0.045 B. 45 C. 4.5 D. 0.45
-

Key sheet

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

Solutions

1. $\frac{85}{100000}$ written as a decimal is

100000 has 5 zeros: move the point 5 places to the left.

$$\frac{85}{100000} = 0.00085$$

Ans: (D) 0.00085

2. $148.9 \times \frac{1}{100} =$

Dividing by 100: move the point 2 places to the left.

$$148.9 \times \frac{1}{100} = 1.489$$

Ans: (B) 1.489

3. 45.2×10000 is equal to

Multiplying by 10000: move the point 4 places to the right.

$$45.2 \times 10000 = 452000.0 = 452000$$

Ans: (C) 452000

4. $15.9 \times \square = 15900$. The number in the box is

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

Ans: (C) 1000

5. Removing the unnecessary zeros, $00.05000 =$

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: $00.05000 = 0.05$

Ans: (B) 0.05

6. $40 + \frac{7}{10} + \frac{5}{1000}$ is the expanded form of

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

Tens 4, ones 0, tenths 7, hundredths 0, thousandths 5

$$= 40.705$$

Ans: (D) 40.705

7. In 47.0825, the digit in the thousandths place is

After the point: tenths, hundredths, thousandths, ten-thousandths.

The thousandths digit of 47.0825 is 2.

Ans: (A) 2

8. $2\frac{5}{8}$ in decimal form is

$$2\frac{5}{8} = 2 + \frac{5}{8}$$

$$\frac{5}{8} = \frac{625}{10 \times 10 \times 10} = \frac{625}{1000} = 0.625$$

$$2 + 0.625 = 2.625$$

Ans: (A) 2.625

9. $45 \div 16 =$

$$45 - 32 = 13, 130 - 128 = 2, 20 - 16 = 4, 40 - 32 = 8, 80 - 80 = 0$$

$$\therefore \frac{45}{16} = 2.8125$$

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

Ans: (D) 2.8125

10. Without actual division, which fraction can be written as a terminating decimal?

$80 = 2 \times 2 \times 2 \times 2 \times 5$: 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: (C) $\frac{13}{80}$

11. $\frac{2}{3} =$

$20 - 18 = 2$: the remainder repeats.

$$\frac{2}{3} = 0.666666 \dots = 0.\overline{6}$$

Ans: (D) $0.\overline{6}$

12. In the form $\frac{p}{q}$, $0.016 =$

$$0.016 = \frac{16}{1000} = \frac{2}{125}$$

Ans: (D) $\frac{2}{125}$

13. $1.\overline{3}$ as a fraction in simplest form is

$$10x = 13.333333 \dots, x = 1.333333 \dots$$

$$(-) 9x = 12, x = \frac{12}{9} = \frac{4}{3}$$

Ans: (A) $\frac{4}{3}$

14. In the form $\frac{p}{q}$, $1.3\overline{8}$ is

$$100x = 138.888888 \dots, 10x = 13.888888 \dots$$

$$(-) 90x = 125, x = \frac{125}{90} = \frac{25}{18}$$

(Short method: $\frac{138-13}{90}$)

Ans: (C) $\frac{25}{18}$

15. The sum of 148.3 and 27.65 is

Keep the decimal points in one line:

$$\begin{array}{r} 148.30 \\ + 27.65 \\ \hline 175.95 \end{array}$$

Ans: (A) 175.95

16. Find $100 - 37.46$.

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

$$\begin{array}{r} 100.00 \\ - 37.46 \\ \hline 62.54 \end{array}$$

Ans: (B) 62.54

17. $1.3 \times 0.05 =$

Multiply without the points: $13 \times 5 = 65$

Decimal places: $1 + 2 = 3$

$$1.3 \times 0.05 = 0.065$$

Ans: (B) 0.065

18. The product of 0.53 and 0.42 is

Multiply without the points: $53 \times 42 = 2226$

Decimal places: $2 + 2 = 4$

$$0.53 \times 0.42 = 0.2226$$

Ans: (C) 0.2226

19. $(0.04)^2$ is equal to

$$(0.04)^2 = 0.04 \times 0.04$$

$4 \times 4 = 16$; decimal places $2 + 2 = 4$

$$(0.04)^2 = 0.0016 \text{ (not } 0.04 \times 2)$$

Ans: (B) 0.0016

20. When 2.45 is divided by 5, the answer is

$$\frac{2.45}{5} = \frac{245}{100 \times 5}$$

$$245 \div 5 = 49$$

$$= \frac{49}{100} = 0.49$$

Ans: (A) 0.49

21. The value of $\frac{0.15}{0.05}$ is

$$\frac{0.15}{0.05} = \frac{0.15 \times 100}{0.05 \times 100} = \frac{15}{5}$$

$$15 \div 5 = 3$$

Ans: (A) 3

22. $\frac{0.064 - 0.016}{0.08} =$

$$0.064 - 0.016 = 0.048$$

$$\frac{0.048 \times 100}{0.08 \times 100} = \frac{4.8}{8} = 0.6$$

Ans: (C) 0.6

23. $\frac{2}{5} + \frac{1}{4} + \frac{7}{25} =$ (decimal form)

LCM of 5, 4, 25 is 100.

$$\frac{2}{5} + \frac{1}{4} + \frac{7}{25} = \frac{40 + 25 + 28}{100} = \frac{93}{100}$$

$$= 0.93$$

Ans: (D) 0.93

24. If $23 \times 47 = 1081$, then $2.3 \times 0.47 =$

Decimal places: $1 + 2 = 3$

$$\text{So } 2.3 \times 0.47 = 1.081$$

Ans: (B) 1.081

25. The product of two decimals is 28.35. One of them is 6.3. The other is

$$x = \frac{28.35}{6.3} = \frac{283.5}{63}$$
$$= 4.5$$

$$\text{Check: } 4.5 \times 6.3 = 28.35$$

Ans: (C) 4.5
