

Decimals and Irrational Numbers

MCQ Test, Set 06

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.

- $\frac{37581}{1000}$ written as a decimal is
A. 3.7581 **B.** 37.581 **C.** 0.37581 **D.** 375.81
- $913.5 \times \frac{1}{10000} =$
A. 0.009135 **B.** 9.135 **C.** 0.9135 **D.** 0.09135
- 0.0208×100000 is equal to
A. 20800 **B.** 208 **C.** 20.8 **D.** 2080
- $36.5 \div \square = 0.0365$. The number in the box is
A. 1000 **B.** 100 **C.** 10000 **D.** 10
- Removing the unnecessary zeros, $007.0700 =$
A. 0.77 **B.** 70.7 **C.** 7.7 **D.** 7.07
- $700 + 3 + \frac{6}{1000}$ is the expanded form of
A. 703.006 **B.** 73.006 **C.** 73.6 **D.** 703.6
- In 5302.86, the place value of 5 is
A. 500 **B.** 5000 **C.** 5 **D.** 50000
- $2\frac{3}{4} =$
A. 2.34 **B.** 2.75 **C.** 0.75 **D.** 27.5
- $35 \div 32 =$
A. 1.3 **B.** 0.109375 **C.** 1.09375 **D.** 10.9375
- Without dividing, pick the fraction that is a terminating decimal.
A. $\frac{7}{120}$ **B.** $\frac{1}{45}$ **C.** $\frac{11}{200}$ **D.** $\frac{13}{35}$
- $\frac{7}{12} =$
A. $0.\overline{7}$ **B.** $1.\overline{714285}$ **C.** $0.5\overline{8}$ **D.** $0.58\overline{3}$

12. In the form $\frac{p}{q}$, $0.008 =$
- A. $\frac{1}{125}$ B. $\frac{2}{25}$ C. $\frac{1}{1250}$ D. $\frac{1}{8}$
-
13. $0.\overline{18}$ as a fraction in simplest form is
- A. 2 B. $\frac{1}{5}$ C. $\frac{9}{50}$ D. $\frac{2}{11}$
-
14. In the form $\frac{p}{q}$, $2.1\overline{5}$ is
- A. $\frac{194}{99}$ B. $\frac{43}{18}$ C. $\frac{97}{45}$ D. $\frac{215}{99}$
-
15. The sum of 72.09 and 8.6 is
- A. 80.69 B. 72.95 C. 70.69 D. 8.069
-
16. Find $7 - 0.625$.
- A. 0.6375 B. 6.375 C. 7.625 D. 63.75
-
17. The product 0.8×0.08 is
- A. 0.064 B. 0.64 C. 0.0064 D. 6.4
-
18. The product of 15 and 0.012 is
- A. 1.8 B. 0.045 C. 0.018 D. 0.18
-
19. $(2.5)^2$ is equal to
- A. 5 B. 62.5 C. 6.25 D. 0.625
-
20. When 0.84 is divided by 12, the answer is
- A. 0.007 B. 7 C. 0.07 D. 0.7
-
21. The value of $\frac{2.56}{1.6}$ is
- A. 16 B. 1.6 C. 0.016 D. 0.16
-
22. The value of $\frac{0.8 \times 0.3}{0.12}$ is
- A. 0.02 B. 20 C. 2 D. 0.2
-
23. In decimal form, $\frac{1}{2} + \frac{2}{5} + \frac{3}{20}$ is
- A. 0.105 B. 0.0105 C. 1.05 D. 10.5
-
24. If $1.8 \times 0.25 = 0.45$, then $18 \times 25 =$
- A. 45 B. 450 C. 4500 D. 4.5
-
25. $0.17 \times x = 0.0918$. Then $x =$
- A. 0.54 B. 0.054 C. 5.4 D. 54
-

Key sheet

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

Solutions

1. $\frac{37581}{1000}$ written as a decimal is

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

$$\frac{37581}{1000} = 37.581$$

Ans: (B) 37.581

2. $913.5 \times \frac{1}{10000} =$

Dividing by 10000: move the point 4 places to the left.

$$913.5 \times \frac{1}{10000} = 0.09135$$

Ans: (D) 0.09135

3. 0.0208×100000 is equal to

Multiplying by 100000: move the point 5 places to the right.

$$0.0208 \times 100000 = 2080.0 = 2080$$

Ans: (D) 2080

4. $36.5 \div \square = 0.0365$. The number in the box is

The point moved 3 places to the left, so we divided by 1000.

Ans: (A) 1000

5. Removing the unnecessary zeros, $007.0700 =$

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: $007.0700 = 7.07$

Ans: (D) 7.07

6. $700 + 3 + \frac{6}{1000}$ is the expanded form of

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

Hundreds 7, tens 0, ones 3, tenths 0, hundredths 0, thousandths 6

$$= 703.006$$

Ans: (A) 703.006

7. In 5302.86, the place value of 5 is

5 is in the thousands place of 5302.86.

Place value = 5000

Ans: (B) 5000

8. $2\frac{3}{4} =$

$$2\frac{3}{4} = 2 + \frac{3}{4}$$

$$\frac{3}{4} = \frac{75}{10 \times 10} = \frac{75}{100} = 0.75$$

$$2 + 0.75 = 2.75$$

Ans: (B) 2.75

9. $35 \div 32 =$

$$35 - 32 = 3, 30 - 0 = 30, 300 - 288 = 12, 120 - 96 = 24, 240 - 224 = 16, 160 - 160 = 0$$
$$\therefore \frac{35}{32} = 1.09375$$

The first remainder 3 is not the decimal part: keep dividing.

Ans: (C) 1.09375

10. Without dividing, pick the fraction that is a terminating decimal.

$200 = 2 \times 2 \times 2 \times 5 \times 5$: 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: (C) $\frac{11}{200}$

11. $\frac{7}{12} =$

$70 - 60 = 10, 100 - 96 = 4, 40 - 36 = 4$: the remainder repeats.

$$\frac{7}{12} = 0.58333333 \dots = 0.58\overline{3}$$

Ans: (D) $0.58\overline{3}$

12. In the form $\frac{p}{q}$, $0.008 =$

$$0.008 = \frac{8}{1000} = \frac{1}{125}$$

Ans: (A) $\frac{1}{125}$

13. $0.\overline{18}$ as a fraction in simplest form is

$$100x = 18.181818 \dots, x = 0.181818 \dots$$

$$(-) 99x = 18, x = \frac{18}{99} = \frac{2}{11}$$

Ans: (D) $\frac{2}{11}$

14. In the form $\frac{p}{q}$, $2.1\overline{5}$ is

$$100x = 215.555555 \dots, 10x = 21.555555 \dots$$

$$(-) 90x = 194, x = \frac{194}{90} = \frac{97}{45}$$

(Short method: $\frac{215-21}{90}$)

Ans: (C) $\frac{97}{45}$

15. The sum of 72.09 and 8.6 is

Keep the decimal points in one line:

$$\begin{array}{r} 72.09 \\ + 8.60 \\ \hline 80.69 \end{array}$$

Ans: (A) 80.69

16. Find $7 - 0.625$.

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

$$\begin{array}{r} 7.000 \\ - 0.625 \\ \hline 6.375 \end{array}$$

Ans: (B) 6.375

17. The product 0.8×0.08 is

Multiply without the points: $8 \times 8 = 64$

Decimal places: $1 + 2 = 3$

$$0.8 \times 0.08 = 0.064$$

Ans: (A) 0.064

18. The product of 15 and 0.012 is

Multiply without the points: $15 \times 12 = 180$

Decimal places: $0 + 3 = 3$

$$15 \times 0.012 = 0.180 = 0.18$$

Ans: (D) 0.18

19. $(2.5)^2$ is equal to

$$(2.5)^2 = 2.5 \times 2.5$$

$25 \times 25 = 625$; decimal places $1 + 1 = 2$

$$(2.5)^2 = 6.25 \text{ (not } 2.5 \times 2)$$

Ans: (C) 6.25

20. When 0.84 is divided by 12, the answer is

$$\frac{0.84}{12} = \frac{84}{100 \times 12}$$

$$84 \div 12 = 7$$

$$= \frac{7}{100} = 0.07$$

Ans: (C) 0.07

21. The value of $\frac{2.56}{1.6}$ is

$$\frac{2.56}{1.6} = \frac{2.56 \times 10}{1.6 \times 10} = \frac{25.6}{16}$$

$$\frac{25.6}{16} = \frac{256}{10 \times 16}$$

$$256 \div 16 = 16$$

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

Ans: (B) 1.6

22. The value of $\frac{0.8 \times 0.3}{0.12}$ is

$$0.8 \times 0.3 = 0.24$$

$$\frac{0.24}{0.12} = \frac{24}{12} = 2$$

Ans: (C) 2

23. In decimal form, $\frac{1}{2} + \frac{2}{5} + \frac{3}{20}$ is

LCM of 2, 5, 20 is 20.

$$\frac{1}{2} + \frac{2}{5} + \frac{3}{20} = \frac{10+8+3}{20} = \frac{21}{20}$$

$$= 1.05$$

Ans: (C) 1.05

24. If $1.8 \times 0.25 = 0.45$, then $18 \times 25 =$

$$18 = 1.8 \times 10 \text{ and } 25 = 0.25 \times 100$$

$$\text{So } 18 \times 25 = 0.45 \times 1000 = 450$$

Ans: (B) 450

25. $0.17 \times x = 0.0918$. Then $x =$

$$x = \frac{0.0918}{0.17} = \frac{9.18}{17}$$

$$= 0.54$$

$$\text{Check: } 0.54 \times 0.17 = 0.0918$$

Ans: (A) 0.54
