

Question 1.

Write the following decimal fractions as decimal numbers:

$$(i) \frac{531}{10}$$

$$(ii) \frac{422}{100}$$

$$(iii) \frac{58301}{1000}$$

$$(iv) \frac{7}{10}$$

$$(v) \frac{3}{100}$$

$$(vi) \frac{37}{1000}$$

Solution:

$$(i) \frac{531}{10} = 53.1$$

$$(ii) \frac{422}{100} = 4.22$$

$$(iii) \frac{58301}{1000} = 58.301$$

$$(iv) \frac{7}{10} = 0.7$$

$$(v) \frac{3}{100} = 0.03$$

$$(vi) \frac{37}{1000} = 0.037$$

Question 2.

Write the following decimal numbers as decimal fractions:

$$(i) 54.01$$

$$(ii) 318.105$$

$$(iii) 0.37$$

$$(iv) 0.047$$

$$(v) 0.03$$

$$(vi) 34.5$$

Solution:

Solution:

$$(i) 54.01 = \frac{5401}{100} \quad (ii) 318.105 = \frac{318105}{1000}$$

$$(iii) 0.37 = \frac{37}{100} \quad (iv) 0.047 = \frac{47}{1000}$$

$$(v) 0.03 = \frac{3}{100} \quad (vi) 34.5 = \frac{345}{10}$$

Question 3.

Write the following decimal numbers as fractions in lowest terms:

(i) 0.8

(ii) 0.04

(iii) 0.125

(iv) 0.225

(v) 0.066

(vi) 0.092

Solution:

$$(i) 0.8 = \frac{8}{10} = \frac{4}{5}$$

$$(ii) 0.04 = \frac{4}{100} = \frac{1}{25}$$

$$(iii) 0.125 = \frac{125}{1000} = \frac{1}{8}$$

$$(iv) 0.225 = \frac{225}{1000} = \frac{9}{40}$$

$$(v) 0.066 = \frac{66}{1000} = \frac{33}{500}$$

$$(vi) 0.092 = \frac{92}{1000} = \frac{23}{250}$$

Question 4.

Convert the following decimal numbers into mixed fractions:

(i) 31.6

(ii) 3.25

(iii) 7.025

(iv) 95.95

Solution:

$$(i) 31.6 = \frac{316}{10} = \frac{158}{5} = 31\frac{3}{5}$$

$$(ii) 3.25 = \frac{325}{100} = \frac{13}{4} = 3\frac{1}{4}$$

$$(iii) 7.025 = \frac{7025}{1000} = \frac{281}{40} = 7\frac{1}{40}$$

$$(iv) 95.95 = \frac{9595}{100} = \frac{1919}{20} = 95\frac{19}{20}$$

Question 5.

Convert the following fractions into decimal numbers:

$$(i) \frac{4}{5}$$

$$(ii) \frac{6}{25}$$

$$(iii) \frac{112}{125}$$

$$(iv) \frac{3}{4}$$

$$(v) \frac{3}{8}$$

$$(vi) 7\frac{3}{40}$$

Solution:

$$(i) \frac{4}{5} = \frac{4 \times 20}{5 \times 20} = \frac{80}{100} = 0.8$$

$$(ii) \frac{6}{25} = \frac{6 \times 4}{25 \times 4} = \frac{24}{100} = 0.24$$

$$(iii) \frac{112}{125} = \frac{112 \times 8}{125 \times 8} = \frac{896}{1000} = 0.896$$

$$(iv) \frac{3}{4} = \frac{3 \times 25}{4 \times 25} = \frac{75}{100} = 0.75$$

$$(v) \frac{3}{8} = \frac{3 \times 125}{8 \times 125} = \frac{375}{1000} = 0.375$$

$$(vi) 7\frac{3}{40} = \frac{7 \times (40 + 3)}{40} = \frac{283 \times 25}{40 \times 25} = \frac{7075}{1000} \\ = 7.075$$

Question 6.

Convert the following unlike decimal numbers to like decimal numbers :

(i) 17.5, 3.912

(ii) 5.04, 13.1902

(iii) 2.451, 3.7, 28.34

(iv) 3.1, 2.678, 27.0103

Solution:

(i) 17.500, 3.912

(ii) 5.0400, 13.1902

(iii) 2.451, 3.700, 28.340

(iv) 3.1000, 2.6780, 27.0103

Question 7.

In each of the following pairs of decimal numbers, state which number is greater ?

(i) 0.3, 0.4

(ii) 1, 0.99

(iii) 1.09, 1.093

(iv) 0.5, 0.05

Solution:

(i) 0.3, 0.4

Multiply both with 10, we get

3, 4

$\therefore$ 0.4 is greater than 0.3

(ii) 1, 0.99

Multiply both with 100, we get

100, 99

$\therefore$ 1 is greater than 0.99

(iii) 1.09, 1.093

Multiply both with 1000, we get

1090, 1093

$\therefore$ 1.093 is greater than 1.09

(iv) 0.5, 0.05

Multiply both with 100, we get

50, 5

$\therefore$ 0.5 is greater than 0.05

Question 8.

In each of the following pairs of decimal numbers, state which number is smaller:

(i) 45.78, 345.8

(ii) 37.701, 37.71

(iii) 5.907, 5.903

Solution:

(i) 45.78

(ii) 37.701

(iii) 5.903

Question 9.

Arrange the following decimal numbers in ascending order:

(i) 27.35, 27.305, 2.7, 2.543

(ii) 4.53, 4.07, 29.1, 0.9, 0.709

Solution:

(i) 2.543, 2.7, 27.305, 27.35

(ii) 0.709, 0.9, 4.07, 4.53, 29.1

Question 10.

Arrange the following decimal numbers in descending order:

(i) 3.303, 33.03, 3.3, 30.33

(ii) 72.5, 2.75, 27.505, 0.275, 2.507

Solution:

(i) 33.03, 30.33, 3.303, 3.3

(ii) 72.5, 27.505, 2.75, 2.507, 0.275