



ST. MARY'S CO-ED SCHOOL, HARDA

[2020-21]

CLASS- VI

SUBJECT- MATHS

CHAPTER- 7

DECIMALS

EXERCISE - 7A

1. Write each of the following in figures:

- (i) Fifty- eight point six three
- (ii) One hundred twenty- four point four two five
- (iii) Seven point seven six
- (iv) Nineteen point eight
- (v) Four hundred four point zero four four
- (vi) Point one seven three
- (vii) Point zero one five

Solutions

- (i) Fifty- eight point six three = 58.63
- (ii) One hundred twenty- four point four two five = 124.425
- (iii) Seven point seven six = 7.76
- (iv) Nineteen point eight = 19.8
- (v) Four hundred four point zero four four = 404.044
- (vi) Point one seven three = 0 .173
- (vii) Point zero one five = 0.015

2. Write the place value of each digit in each of the following decimals:

- (i) 14.83
- (ii) 275.269

(iii) 46.075

(iv) 302.459

(v) 5370.34

(vi) 186.209

Solutions

(i) 14.83

Here, in 14.83

Place value of 1 = 1 tens

= 10

Place value of 4 = 4 ones

= 4

Place value of 8 = 8 tenths

= $8 / 10$

Place value of 3 = 3 hundredths

= $3 / 100$

(ii) 275.269

Here, in 275.269

Place value of 2 = 2 hundreds

= 200

Place value of 7 = 7 tens

= 70

Place value of 5 = 5 ones

= 5

Place value of 2 = 2 tenths

= $2 / 10$

Place value of 6 = 6 hundredths

= $6 / 100$

Place value of 9 = 9 thousandths

$$= 9 / 1000$$

(iii) 46.075

Here, in 46.075

Place value of 4 = 4 tens

$$= 40$$

Place value of 6 = 6 ones

$$= 6$$

Place value of 0 = 0 tenths

$$= 0 / 10$$

$$= 0$$

Place value of 7 = 7 hundredths = $7 / 100$

Place value of 5 = 5 thousandths = $5 / 1000$

(iv) 302.459

Here, in 302.459

Place value of 3 = 3 hundreds

$$= 300$$

Place value of 0 = 0 tens

$$= 0$$

Place value of 2 = 2 ones

$$= 2$$

Place value of 4 = 4 tenths

$$= 4 / 10$$

Place value of 5 = 5 hundredths

$$= 5 / 100$$

Place value of 9 = 9 thousandths

$$= 9 / 1000$$

(v) 5370.34

Here, in 5370.34

Place value of 5 = 5 thousands

= 5000

Place value of 3 = 3 hundreds

= 300

Place value of 7 = 7 tens

= 70

Place value of 0 = 0 ones

= 0

Place value of 3 = 3 tenths

= $3 / 10$

Place value of 4 = 4 hundredths

= $4 / 100$

(vi) 186.209

Here, in 186.209

Place value of 1 = 1 hundreds

= 100

Place value of 8 = 8 tens

= 80

Place value of 6 = 6 ones

= 6

Place value of 2 = 2 tenths

= $2 / 10$

Place value of 0 = 0 hundredths

= 0

Place value of 9 = 9 thousandths

$$= 9 / 1000$$

3. Write each of the following decimals in expanded form:

(i) 67.83

(ii) 283.61

(iii) 24.675

(iv) 0.294

(v) 8.006

(vi) 4615.72

Solutions

(i) 67.83

= 6 tens + 7 ones + 8 tenths + 3 hundredths

$$= (6 \times 10) + (7 \times 1) + (8 \times 1 / 10) + (3 \times 1 / 100)$$

$$= 60 + 7 + 8 / 10 + 3 / 100$$

$$\therefore 67.83 = 60 + 7 + 8 / 10 + 3 / 100$$

(ii) 283.61

= 2 hundreds + 8 tens + 3 ones + 6 tenths + 1 hundredths

$$= (2 \times 100) + (8 \times 10) + (3 \times 1) + (6 \times 1 / 10) + (1 \times 1 / 100)$$

$$= 200 + 80 + 3 + 6 / 10 + 1 / 100$$

$$\therefore 283.61 = 200 + 80 + 3 + 6 / 10 + 1 / 100$$

(iii) 24.675

= 2 tens + 4 ones + 6 tenths + 7 hundredths + 5 thousandths

$$= (2 \times 10) + (4 \times 1) + (6 \times 1 / 10) + (7 \times 1 / 100) + (5 \times 1 / 1000)$$

$$= 20 + 4 + 6 / 10 + 7 / 100 + 5 / 1000$$

$$\therefore 24.675 = 20 + 4 + 6 / 10 + 7 / 100 + 5 / 1000$$

(iv) 0.294

= 2 tenths + 9 hundredths + 4 thousandths

$$= (2 \times 1 / 10) + (9 \times 1 / 100) + (4 \times 1 / 1000)$$

$$= 2 / 10 + 9 / 100 + 4 / 1000$$

$$\therefore 0.294 = 2 / 10 + 9 / 100 + 4 / 1000$$

(v) 8.006

= 8 ones + 0 tenths + 0 hundredths + 6 thousandths

$$= (8 \times 1) + (0 \times 1 / 10) + (0 \times 1 / 100) + (6 \times 1 / 1000)$$

$$= 8 + 0 / 10 + 0 / 100 + 6 / 1000$$

$$= 8 + 6 / 1000$$

$$\therefore 8.006 = 8 + 6 / 1000$$

(vi) 4615.72

= 4 thousands + 6 hundreds + 1 tens + 5 ones + 7 tenths + 2 hundredths

$$= (4 \times 1000) + (6 \times 100) + (1 \times 10) + (5 \times 1) + (7 \times 1 / 10) + (2 \times 1 / 100)$$

$$= 4000 + 600 + 10 + 5 + 7 / 10 + 2 / 100$$

$$\therefore 4615.72 = 4000 + 600 + 10 + 5 + 7 / 10 + 2 / 100$$

4. Write each of the following in decimal form:

(i) $40 + 6 + 7 / 10 + 9 / 100$

(ii) $500 + 70 + 8 + 3 / 10 + 1 / 100 + 6 / 1000$

(iii) $700 + 30 + 1 + 8 / 10 + 4 / 100$

(iv) $600 + 5 + 7 / 100 + 9 / 1000$

(v) $800 + 5 + 8 / 10 + 6 / 1000$

(vi) $30 + 9 + 4 / 100 + 8 / 1000$

Solutions

(i) The decimal form of $40 + 6 + 7 / 10 + 9 / 100 = 40 + 6 + 0.7 + 0.09$

$$= 46 + 0.7 + 0.09$$

$$= 46.79$$

(ii) The decimal form of $500 + 70 + 8 + 3 / 10 + 1 / 100 + 6 / 1000$

$$= 500 + 70 + 8 + 0.3 + 0.01 + 0.006$$

$$= 578.316$$

(iii) The decimal form of $700 + 30 + 1 + 8 / 10 + 4 / 100 = 700 + 30 + 1 + 0.8 + 0.04$
 $= 731.84$

(iv) The decimal form of $600 + 5 + 7 / 100 + 9 / 1000 = 605 + 0.07 + 0.009$
 $= 605.079$

(v) The decimal form of $800 + 5 + 8 / 10 + 6 / 1000 = 805 + 0.8 + 0.006$
 $= 805.806$

(vi) The decimal form $30 + 9 + 4 / 100 + 8 / 1000 = 39 + 0.04 + 0.008$
 $= 39.048$

Q.7 Arrange the following decimals in ascending order.

i) 5.8 , 7.2 , 5.69 , 7.14 , 5.06

ii) 0.6 , 6.6 , 6.06 , 66.6 , 0.06

iii) 6.54 , 6.45 , 6.4 , 6.5 , 6.05

iv) 3.3 , 3.03 , 3.303 , 0.33 , 3.003

SOLUTION

i) 5.06 , 5.69 , 5.8 , 7.14 , 7.2

ii) 0.06 , 6.60 , 6.06 , 6.6 , 66.6

iii) 6.05 , 6.4 , 6.45 , 6.5 , 6.54

iv) 0.33 , 3.003 , 3.033 , 3.3 , 3.303

Q.8 Arrange the following in descending order.

i) 7.3 , 8.73 , 73.03 , 7.33 , 8.073

ii) 3.3 , 3.03 , 30.3 , 30.03 , 3.003

SOLUTION

i) 73.03 , 8.73 , 8.073 , 7.33 , 7.3

ii) 30.3 , 30.03 , 3.3 , 3.03 , 3.003

EXERCISE -7B

1. Convert each of the following into a fraction in its simplest form:

1. .9

Solution

$$.9 = 9 / 10$$

∴ The simplest form of $.9 = 9 / 10$

2. 0.6

Solution

$$0.6 = 6 / 10$$

$$= 3 / 5$$

∴ The simplest form of $0.6 = 3 / 5$

3. .08

Solution

$$.08 = 8 / 100$$

$$= 4 / 50$$

$$= 2 / 25$$

∴ The simplest form of $.08 = 2 / 25$

4. 0.15

Solution

$$0.15 = 15 / 100$$

$$= 3 / 20$$

∴ The simplest form of $0.15 = 3 / 20$

5. 0.48

Solution

$$0.48 = 48 / 100$$

$$= 12 / 25$$

∴ The simplest form of $0.48 = 12 / 25$

6. .053

Solution

$$.053 = 53 / 1000$$

∴ The simplest form of .053 = 53 / 1000

7. 0.125

Solution

$$0.125 = 125 / 1000$$

$$= 25 / 200$$

$$= 5 / 40$$

$$= 1 / 8$$

∴ The simplest form of 0.125 = 1 / 8

8. .224

Solution

$$.224 = 224 / 1000$$

$$= 56 / 250$$

$$= 28 / 125$$

∴ The simplest form of .224 = 28 / 125

Convert each of the following as a mixed fraction:

9. 6.4

Solution

Given

$$6.4 = 64 / 10$$

$$= 32 / 5$$

$$= 6 \frac{2}{5}$$

5	32	6
	30	
	2	

∴ Mixed fraction of 6.4 = $6 \frac{2}{5}$

10. 16.5

Solution

Given

2	33	16
	32	
	1	

$$16.5 = 165 / 10$$

$$= 33 / 2$$

$$= 16 \frac{1}{2}$$

∴ Mixed fraction of 16.5 = $16 \frac{1}{2}$

11. 8.36

Solution

Given

$$8.36 = 836 / 100$$

$$= 209 / 25$$

25	209	8
	200	
	9	

$$= 8 \frac{9}{25}$$

∴ Mixed fraction of 8.36 = $8 \frac{9}{25}$

12. 4.275

Solution

$$4.275$$

$$= 4275 / 1000$$

$$= 171 / 40$$

40	171	4
	160	
	11	

$$= 4 \frac{11}{40}$$

∴ Mixed fraction of 4.275 = $4 \frac{11}{40}$

13. 25.06

Solution

Given

25.06

= 2506 / 100

= 1253 / 50

50	1253	25
	1250	
	3	

= $25 \frac{3}{50}$

∴ Mixed fraction of 25.06 = $25 \frac{3}{50}$

14. 7.004

Solution

Given

7.004

= 7004 / 1000

= 1751 / 250

250	1751	7
	1750	
	1	

= $7 \frac{1}{250}$

∴ Mixed fraction of 7.004 = $7 \frac{1}{250}$

15. 2.052

Solution

Given

2.052

= 2052 / 1000

= 513 / 250

250	513	2
	500	
	13	

$$= 2 \frac{13}{250}$$

∴ Mixed fraction of 2.052 = $2 \frac{13}{250}$

Q.33 Using decimals , express

1) 8 kg 640g in kilograms

2) 9 kg 37g in kilograms

3) 6kg 8g in kilograms

SOLUTION

$$1) 8\text{kg} + 640\text{ g} = 8\text{kg} + \frac{640}{1000} \text{ kg}$$

$$= 8\text{kg} + 0.640 \text{ kg} = 8.640 \text{ kg}$$

$$2) 9\text{kg} 37\text{g} = 9\text{kg} + \frac{37}{1000} \text{ kg}$$

$$= 9 \text{ kg} + 0.037\text{kg} = 9.037\text{kg}$$

$$3) 6\text{kg} 8\text{g} = 6\text{kg} + \frac{8}{1000} \text{ kg}$$

$$= 6\text{kg} + 0.008 \text{ kg} = 6.008\text{kg}$$

EXERCISE - 7C

Add the following decimals:

1. 9.6, 14.8, 37, and 5.9

Solution

Converting the given decimals into like decimals, we get

9.6, 14.8, 37.0 and 5.9

Writing these decimals in column form and adding, we get

9.6

14.8

37.0

5.9

67.3

∴ The sum of the given decimals is 67.3

2. 23.7, 106.94, 68.9 and 29.5

Solution

Converting the given decimals into like decimals, we get

23.70, 106.94, 68.90 and 29.50

Now writing these decimals in column form and adding, we get

23.70

106.94

68.90

29.50

229.04

∴ The sum of the given decimals is 229.04

3. 72.8, 7.68, 16.23 and 0.7

Solution

Converting the given decimals into like decimals, we get

72.80, 7.68, 16.23 and 0.70

Now writing these decimals in column form and adding, we get

72.80

7.68

16.23

0.70

97.41

∴ The sum of the given decimals is 97.41

4. 18.6, 84.75, 8.345 and 9.7

Solution

Converting the given decimals into like decimals, we get

18.600, 84.750, 8.345 and 9.700

Now writing these decimals in column form and adding, we get

18.600

84.750

8.345

9.700

121.395

∴ The sum of the given decimals is 121.395

5. 8.236, 16.064, 63.8 and 27.53

Solution

Converting the given decimals into like decimals, we get

8.236, 16.064, 63.800 and 27.530

Now writing these decimals in column form and adding, we get

8.236

16.064

63.800

27.530

115.630

∴ The sum of the given decimals is 115.63

6. 28.9, 19.64, 123.697 and 0.354

Solution

Converting the given decimals into like decimals, we get

28.900, 19.640, 123.697 and 0.354

Now writing these decimals in column form, we get

28.900

19.640

123.697

0.354

172.591

∴ The sum of the given decimals is 172.591

7. 4.37, 9.638, 17.007 and 6.8

Solution

Converting these decimals into like decimals, we get

4.370, 9.638, 17.007 and 6.800

Now writing these decimals in column form, we get

4.370

9.638

17.007

6.800

37.815

∴ The sum of the given decimals is 37.815

Q.9 During three days of a week , a rickshaw puller earns Rs. 32.60 , Rs 56.80 and Rs 72 respectively. What is the total earning during these days?

SOLUTION

Money earned during first day = Rs. 32.60

Money earned during second day = Rs 56.80

Money earned during third day = Rs 72

Total money earned during three days (Rs. 32.60 + Rs 56.80 + Rs 72)= Rs. 161.40

Hence . Total money earned during three days is Rs. 161.40

Q.10 A man purchases an almirah for Rs 11025 , gives Rs. 172.50 as its cartage and spends Rs. 64.80 on its repair. How much does the almirah cost him.

SOLUTION

Cost of almirah = Rs 11025

Cartage charges = Rs. 172.50

Repair charges = Rs. 64.80

Total cost of almirah = Rs. 11262.30

Hence , the total cost of almirah is Rs. 11262.30