Exercise 7A

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1.

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.

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.

Solutions

(i) 67.83

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

= (6 × 10) + (7 × 1) + (8 × 1 / 10) + (3 × 1 / 100)

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

∴ 67.83 = 60 + 7 + 8 / 10 + 3 / 100

(ii) 283.61

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

= (2 × 100) + (8 × 10) + (3 × 1) + (6 × 1 / 10) + (1 × 1 / 100)

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

∴ 283.61 = 200 + 80 + 3 + 6 / 10 + 1 / 100

(iii) 24.675

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

= (2 × 10) + (4 × 1) + (6 × 1 / 10) + (7 × 1 / 100) + (5 × 1 / 1000)

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

∴ 24.675 = 20 + 4 + 6 / 10 + 7 / 100 + 5 / 1000

(iv) 0.294

= 2 tenths + 9 hundredths + 4 thousandths

= (2 × 1 / 10) + (9 × 1 / 100) + (4 × 1 / 1000)

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

∴0.294 = 2 / 10 + 9 / 100 + 4 / 1000

(v) 8.006

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

= (8 × 1) + (0 × 1 /1 0) + (0 × 1 / 100) + (6 × 1 / 1000)

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

= 8 + 6 / 1000

∴8.006 = 8 + 6 / 1000

(vi) 4615.72

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

= (4 × 1000) + (6 × 100) + (1 × 10) + (5 × 1) + (7 × 1 / 10) + (2 × 1 / 100)

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

∴ 4615.72 = 4000 + 600 + 10 + 5 + 7 / 10 + 2 / 100

4.

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

Exercise 7B

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1.

Solution

.9 = 9 / 10

∴ The simplest form of .9 = 9 / 10

2.

Solution

0.6 = 6 / 10

= 3 / 5

∴ The simplest form of 0.6 = 3 / 5

3.

Solution

.08 = 8 / 100

= 4 / 50

= 2 / 25

∴ The simplest form of .08 = 2 / 25

4.

Solution

0.15 = 15 / 100

= 3 / 20

∴ The simplest form of 0.15 = 3 / 20

5.

Solution

0.48 = 48 / 100

= 12 / 25

∴ The simplest form of 0.48 = 12 / 25

6.

Solution

.053 = 53 / 1000

∴ The simplest form of .053 = 53 / 1000

7.

Solution

0.125 = 125 / 1000

= 25 / 200

= 5 / 40

= 1 / 8

∴ The simplest form of 0.125 = 1 / 8

8.

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.

Solution

Given

6.4 = 64 / 10

= 32 / 5

= 6 2/5

5	32	6
	30	
	2	

∴ Mixed fraction of 6.4 = 6 2 / 5

10.

Solution

Given

2	33	16
	32	
	1	

16.5 = 165 / 10

= 33 / 2

= 16 1 / 2

∴ Mixed fraction of 16.5 = 16 1 / 2

11.

Solution

Given

8.36 = 836 / 100

= 209 / 25

25	209	8
	200	
	9	

= 8 9 / 25

∴ Mixed fraction of 8.36 = 8 9 / 25

12.

Solution

Given

4.275

= 4275 / 1000

= 171 / 40

40	171	4
	160	
	11	

= 4 11 / 40

∴ Mixed fraction of 4.275 = 4 11 / 40

13.

Solution

Given

25.06

= 2506 / 100

= 1253 / 50

50	1253	25
	1250	
	3	

= 25 3 / 50

∴ Mixed fraction of 25.06 = 25 3 / 50

14.

Solution

Given

7.004

= 7004 / 1000

= 1751 / 250

250	1751	7
	1750	
	1	

= 7 1 / 250

∴ Mixed fraction of 7.004 = 7 1 / 250

15.

Solution

Given

2.052

= 2052 / 1000

= 513 / 250

250	513	2
	500	
	13	

= 2 13 / 250

∴ Mixed fraction of 2.052 = 2 13 / 250

16.

Solution

Given

3.108

= 3108 / 1000

= 777 / 250

250	777	3
	750	
	27	

= 3 27 / 250

∴ Mixed fraction of 3.108 = 3 27 / 250

17.

Solution

Given

23 / 10

By Actual division, we get

10	23	2
	20	
	3	

= 2 3 / 10

= 2 + 0.3

= 2.3

∴ Decimal form of 23 / 10 = 2.3

18.

Solution

Given

167 / 100

By Actual division, we get

100	167	1
	100	
	67	

= 1 67 / 100

= 1 + 0.67

= 1.67

∴ Decimal form of 167 / 100 = 1.67

Exercise 7C

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1.

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.

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.

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.

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.

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.

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.

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

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Subtract:

1.

Solution

Now writing these decimals in column form with the larger one at the top and subtracting, we get

53.74

– 27.86

_____

25.88

_____

Hence, 53.74 – 27.86 = 25.88

2.

Solution

Now writing these decimals in column form with the larger one at the top and subtracting, we get

103.87

– 64.98

_____

38.89

_____

Hence, 103.87 – 64.98 = 38.89

3.

Solution

Converting the given decimals into like decimals, we get

59.63 and 92.40

Now writing these decimals in column form with the larger one at the top and subtracting, we get

92.40

– 59.63

_____

32.77

_____

Hence, 92.40 – 59.63 = 32.77

4.

Solution

Converting the given decimals into like decimals, we get

56.80 and 204.00

Now writing these decimals in column form with the larger one at the top and subtracting, we get

204.00

– 56.80

_____

147.20

_____

Hence, 204.00 – 56.80 = 147.2

5.

Solution

Converting the given decimals into like decimals, we get

127.38 and 216.20

Now writing these decimals in column form with the larger one at the top and subtracting, we get

216.20

– 127.38

_____

88.82

_____

Hence, 216.20 – 127.38 = 88.82

6.

Solution

Converting the given decimals into like decimals, we get

39.875 and 70.680

Now writing these decimals in column form with the larger one at the top and subtracting, we get

70.680

– 39.875

_____

30 .805

_____

Hence, 70.680 – 39.875 = 30.805

7.

Solution

Converting the given decimals into like decimals, we get

348.237 and 523.120

Now writing these decimals in column form with the larger one at the top and subtracting, we get

523.120

– 348.237

_____

174.883

_____

Hence, 523.120 – 348.237 = 174.883

8.

Solution

Converting the given decimals into like decimals, we get

458.573 and 600.000

Now writing these decimals in column form with the larger one at the top and subtracting, we get

600.000

– 458.573

_____

141.427

_____

Hence, 600.000 – 458.573 = 141.427

9.

Solution

Now writing these decimals in column form with the larger one at the top and subtracting, we get

206.321

– 149.456

_____

56.865

_____

Hence, 206.321 – 149.456 = 56.865

10.

Solution

Converting the given decimals into like decimals, we get

0.612 and 3.400

Now writing these decimals in column form with the larger one at the top and subtracting, we get

3.400

– 0.612

_____

2.788

_____

Hence, 3.400 – 0.612 = 2.788

11.

Solution

Converting the given decimals into like decimals, we get

(37.60 + 72.85) – (58.678 + 6.090)

Now adding and subtracting as shown below

37.60

+ 72.85

_____

110.45

_____

58.678

+ 6.090

_____

64.768

_____

Now subtract

110.45 – 64.768

110.450

– 64.768

_____

45.682

_____

Hence, 37.6 + 72.85 – 58.678 – 6.09 = 45.682

Exercise 7E

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1.

Solution

7 / 10 = 7 tenths

= 0.7

Hence, option (c) is the correct answer

2.

Solution

5 / 100 = 5 hundredths

= 0.05

Hence, option (d) is the correct answer

3.

Solution

9 / 1000 = 9 thousandths

= 0.009

Hence, option (b) is the correct answer

4.

Solution

16 / 1000 = 16 thousandths

= 0.016

Hence, option (a) is the correct answer

5.

Solution

134 / 1000 = 134 thousandths

= 0.134

Hence, option (c) is the correct answer

6.

Solution

2 = 2 (17 hundredths)

= 2 + 17 / 100

= 2 + 0.17

= 2.17

Hence, option (a) is the correct answer

7.

Solution

4 = 4 (3 hundredths)

= 4 + 3 / 100

= 4 + 0.03

= 4.03

Hence, option (b) is the correct answer

8.

Solution

6.25 = 6 / 25

= 6 + 0.25

= 6 + 1 / 4

= 6 1/4

Hence, option (b) is the correct answer

9.

Solution

6 / 25 = 6.25

= 0.24

25	60	0.24
	50	
	100	
	100	
	0	

Hence, option (b) is the correct answer

10.

Solution

4 = 4 + 7 / 8

= 4 + 0.875

= 4.875

Hence, option (c) is the correct answer

11.

Solution

24.8 = 24 + 0.8

= 24 + 8 /10

= 24 + 4 / 5

= 24 4/5

Hence, option (a) is the correct answer

12.

Solution

2 = 2 + 1 / 25

= 2 + 0.04

= 2.04

Hence, option (b) is the correct answer

13.

Solution

2 + 3/10 + 4/100 = 2 + 0.3 + 0.04

= 2.34

Hence option (c) is the correct answer

14.

Solution

2 + 6 / 100 = 2 + 0.06

= 2.06

Hence, option (b) is the correct answer

15.

Solution

4 / 100 + 7 /10000 = 0.04 + 0.0007

= 0.0407

Hence, option (c) is the correct answer