Fractions and Decimals: Exercise 2.5

Q.1 Which is greater?
(i) 0.5 or 0.05 **(ii) 0.7 or 0.5** **(iii) 7 or 0.7**
(iv) 1.37 or 1.49 **(v) 2.03 or 2.30** **(vi) 0.8 or 0.88**
Sol:
(i) Given: 0.5 or 0.05
On comparing whole number, 0 = 0
And on comparing tenths place, 5 > 0
Thus, 0.5 > 0.05

(ii) Given: 0.7 or 0.5
On comparing whole number, 0 = 0
And on comparing tenths place, 7 > 5
Thus, 0.7 > 0.5

(iii) Given: 7 or 0.7
On comparing whole number, 7 > 0
Thus, 7 > 0.7

(iv) Given: 1.37 or 1.49
On comparing whole number, 1 = 1
And on comparing tenths place, 3 < 4
Thus, 1.37 < 1.49

(v) Given: 2.03 or 2.30
On comparing whole number, 2 = 2
And on comparing tenths place = 0 < 3
Thus, 2.03 < 2.30

(vi) Given: 0.8 or 0.88
On comparing whole number, 0 = 0,
Comparing tenths place, 8 = 8
And on comparing the hundredths place digit, 0 < 8
Thus, 0.8 < 0.88

Q.2 Express as rupees using decimals:
(i) 7 paise **(ii) 7 rupees 7 paise** **(iii) 77 rupees 77 paise**
(iv) 50 paise **(v) 235 paise**
Sol: Since, 100 paise = ₹ 1
1 paisa = ₹ (1/100) ₹
(i) Given: 7 paise
Here, we convert paise into rupees
Since, 1 paisa = ₹ (1/100)
7 paisa = ₹ (7/100)
= ₹ 0.07

(ii) Given: 7 rupees 7 paise

Here, we convert paise into rupees
Since, 1 paisa = ₹ (1/100)
So, 7 rupees 7 paise = ₹ 7 + ₹ (7/100)
= ₹ 7 + ₹ 0.07
= ₹ 7.07

(iii) Given: 77 rupees 77 paise
Here, we convert paise into rupees
Since, 1 paisa = ₹ (1/100)
So, 77 rupees 77 paise = ₹ 77 + ₹ (77/100)
= ₹ 77 + ₹ 0.77
= ₹ 77.77

(iv) Given: 50 paise
Here, we convert paise into rupees
Since, 1 paisa = ₹ (1/100)
50 paisa = ₹ (50/100)
= ₹ 0.50

(v) Given: 235 paise
Here, we convert paise into rupees
Since, 1 paisa = ₹ (1/100)
235 paisa = ₹ (235/100)
= ₹ 2.35

Q.3 (i) Express 5 cm in metre and kilometre (ii) Express 35 mm in cm, m and km.
Sol:
(i) Given: Express 5 cm in metre and kilometre
Since, 100 cm = 1 metre
So, 5 cm will be = (1/100) x 5
= 5/100
= 0.05 metre
And since, 1000 metre = 1 kilomtre
1 metre = (1/1000) kilomtre
So, 0.05 metre will be = (1/1000) x 0.05
= 0.05 / 1000
= 0.00005 km

(ii) Given: Express 35 mm in cm, m and km.
Since, 10 mm = 1cm
1 mm = (1/10) cm
So, 35 mm will be = (1/10) x 35
= 35/10
= 3.5 cm

Since, 100 cm = 1m
1 cm = (1/100) m
So, 3.5 cm = (1/100) x 3.5 m
= 3.5/100
= 0.035 m

And since, 1000 m = 1 km
1 m = (1/1000) km
So, 0.035 m will be = (1/1000) x 0.035
= 0.035/1000
= 0.000035 km

Q.4 Express in kg:
(i) 200 g (ii) 3470 g (iii) 4 kg 8 g
Sol:
(i) Given: 200 g
Since, 1000 g = 1kg
1g = (1/1000) kg
200 g = (1/1000) x 200
= 200/1000
= 0.2kg

(ii) Given: 3470 g
Since, 1000 g = 1kg
1g = (1/1000) kg
3470 g = (1/1000) x 3470
= 3470/1000
= 3.470 kg

(iii) Given: 4 kg 8 g
Since, 1000 g = 1kg
1g = (1/1000) kg
8 g = (1/1000) x 8
= 8/1000
= 0.008 kg
And 4 kg 8 g = 4 + 0.008
= 4.008 kg

Q.5 Write the following decimal numbers in the expanded form:
(i) 20.03 (ii) 2.03 (iii) 200.03 (iv) 2.034
Sol: Expanded form of given decimal number:
(i) Given: 20.03 = (2 × 10) + (0 × 1) + [0 × (1/10)] + [3 × (1/100)]
(ii) Given: 2.03 = (2 × 1) + [0 × (1/10)] + [3 × (1/100)]
(iii) Given: 200.03 = (2 × 100) + (0 × 10) + (0 × 1) + [0 × (1/10)] + [3 × (1/100)]
(iv) Given: 2.034 = (2 × 1) + [0 × (1/10)] + [3 × (1/100)] + [4 × (1/1000)]

Q.6 Write the place value of 2 in the following decimal numbers:
(i) 2.56 (ii) 21.37 (iii) 10.25 (iv) 9.42 (v) 63.352
Sol: The place value of 2 in the following decimal numbers
(i) Given: 2.56
Since, digit 2 in 2.56 = 2 × 1
= 2
Thus, place value of 2 in 2.56 is ones.

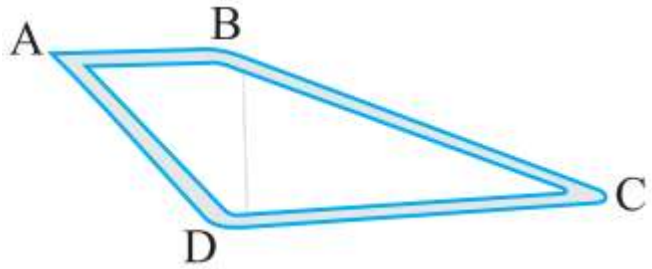
(ii) Given: 21.37
Since, digit 2 in 21.37 = 2 × 10
= 20
Thus, Thus, place value of 2 in 21.37 is tens.

(iii) Given: 10.25
Since, digit 2 in 10.25 = (2/10)
= 0.2
Thus, Place value of digit 2 in 10.25 is tenths.

(iv) Given: 9.42
Since, digit 2 in 9.42 = (2/100)
= 0.02
Thus, Place value of digit 2 in 9.42 is hundredths.

(v) Given: 63.352
Since, digit 2 in 63.352 = (2/1000)
= 0.002
Thus, Place value of digit 2 in 63.352 is thousandths

Q.7 Dinesh went from place A to place B and from there to place C. A is 7.5 km from B and B is 12.7 km from C. Ayub went from place A to place D and from there to place C. D is 9.3 km from A and C is 11.8 km from D. Who travelled more and by how much?



Sol:
Since, Dinesh went from place A to place B and from there to place C.
So, distance covered by Dinesh from A to C = AB + BC
= 7.5 + 12.7
= 20.2 km
Now, Ayub went from place A to place D and from there to place C.
So, distance covered by Ayub from A to C = AD + DC
= 9.3 + 11.8
= 21.1 km
So, from above calculation, Ayub covered more distance by = 21.2 – 20.2
= 0.9 km
Thus, Ayub covered 0.9 km more than Dinesh.

Q.8 Shyama bought 5 kg 300 g apples and 3 kg 250 g mangoes. Sarala bought 4 kg 800 g oranges and 4 kg 150 g bananas. Who bought more fruits?

Sol: **Given:** Fruits bought by Shyama bought the fruits

= 5 kg 300 g apples + 3 kg 250 g mangoes

Since, 1000g = 1kg

1g = (1/1000) kg

= 5.300 kg apples + 3.250 kg mangoes

= 8.550 kg of fruits

Sarala bought fruits = 4 kg 800 g oranges + 4 kg 150 g bananas

= 4.800 kg oranges + 4.150 kg bananas

= 8.950 kg of fruits

From above calculation, 8.950 kg > 8.550 kg

Thus, Sarala bought more fruits.

Q.9 How much less is 28 km than 42.6 km?

Sol: For this problem we need to find out the difference of 42.6km and 28 km.

Since, 28 km < 42.6 km

So, 42.6 - 28.0 = 14.6km