Chapter 7: Decimals

7.1

Calculators can be used only for questions with '*'.

Level 1

Exercise 1

1. Convert each decimal into a fraction or mixed number. Reduce it into the simplest form where necessary.

   (a) 0.075 = _____ (b) 0.875 = _____

   (c) 3.4 = _____ (d) 14.36 = _____

2. Find the missing numbers.

   (a) 2.6 × _____ = 2600 (b) 1.005 × _____ = 10.05

   (c) _____ × 100 = 3 (d) _____ × 1000 = 970

3. Multiply.

   (a) 0.4 × 60 = 0.4 × _____ × 10 = _____ × 10 = _____

   (b) 1.28 × 30 = _____ × _____ × 10 = _____ × 10

   = _____

   (c) 0.74 × 200 = _____ × _____ × 100 = _____ × 100

   = _____

   (d) 3.35 × 6000 = _____ × _____ × 1000

   = _____ × 1000

   = _____

1. (a) $\frac{3}{40}$

   (b) $\frac{7}{8}$

   (c) $3\frac{2}{5}$

   (d) $14\frac{9}{25}$

2 (a) 1000
(b) 10
(c) 0.03
(d) 0.97

3. (a) 0.4 × 60 = 0.4 × 6 × 10 = 2.4 × 10 = 24
   (b) 1.28 × 30 = 1.28 × 3 × 10 = 3.84 × 10 = 38.
   (c) 0.74 × 200 = 0.74 × 2 × 100 = 1.48 × 100
   = 148
   (d) 3.35 × 6000 = 3.35 × 6 × 1000

4. Find the missing numbers.

(a) 650 ÷ _____ = 6.5 (b) 7.04 ÷ _____ = 0.704

(c) _____ ÷ 1000 = 0.016 (d) _____ ÷ 10 = 30.8

4 (a) 100
(b) 10
(c) 16
(d) 308

5. Divide.

(a) 16 ÷ 40 = 16 ÷ _____ ÷ _____

= _____ ÷ _____ = _____

(b) 2.07 ÷ 90 = _____ ÷ _____ ÷ _____

= _____ ÷ _____ = _____

(c) 91.2 ÷ 300 = _____ ÷ _____ ÷ _____

= _____ ÷ _____ = _____

(d) 1680 ÷ 8000 = _____ ÷ _____ ÷ _____

= _____ ÷ _____ = _____

5a) 0.4 b) 0.023

c) 0.304 d) 0.21

*6. Work out the following with your calculator.

(a) The sum of $245.35 and $955.75 is _____.

(b) The difference between 143.8 cm and 119.9 cm is _____.

(c) Multiply 6.586 kg by 25. The answer is _____.

(d) Divide $383.60 by 56. The answer is _____.

*6. (a) $1201.10 (b) 23.9 cm
(c) 164.65 kg (d) $6.85
7. (a) 43 (b) 609
(c) 210.5 (d) 2870

7. Convert to centimetres.

(a) 0.43 m = _____ cm (b) 6.09 m = _____ cm

(c) 2.105 m = _____ cm (d) 28.7 m = _____ cm

8. Convert to metres and centimetres.

(a) 1.74 m = _____ m _____ cm

(b) 5.6 m = _____ m _____ cm

(c) 84.2 m = _____ m _____ cm

(d) 29.07 = _____ m _____ cm

9. Convert to metres.

(a) 0.365 km = _____ m (b) 4.5 km = _____ m

(c) 21.73 km = _____ m (d) 7.01 km = _____ m

10. Convert to kilometres and metres.

(a) 2.351 km = _____ km _____ m

(b) 3.04 km = _____ km _____ m

(c) 34.009 km = _____ km _____ m

(d) 8.1 km = _____ km _____ m

Exercise 2

1. Convert to grams.

(a) 0.09 kg = _____ g (b) 3.8 kg = _____ g

(c) 27.069 kg = _____ g (d) 9.39 kg = _____ g

8. (a) 1 m 74 cm (b) 5 m 60 cm
(c) 84 m 20 cm (d) 29 m 7 cm

9. (a) 365 (b) 4500
(c) 21 730 (d) 7010

10. (a) 2 km 351 m (b) 3 km 40 m
(c) 34 km 9 m (d) 8 km 100 m

Exercise 2 :

1. (a) 90 (b) 3800
(c) 27 069 (d) 9390

2. Convert to kilograms and grams.

(a) 4.126 kg = _____ kg _____ g

(b) 3.03 kg = _____ kg _____ g

(c) 30.3 kg = _____ kg _____ g

(d) 19.107 kg = _____ kg _____ g

3. Convert to millilitres.

(a) 0.802 *l* = _____ m*l*

(b) 3.7 *l* = _____ m*l*

(c) 5.404 *l* = _____ m*l*

(d) 17.29 *l* = _____ m*l*

4. Convert to litres and millilitres.

(a) 1.21 *l* = _____ *l* _____ m*l*

(b) 12.01 *l* = _____ *l* _____ m*l*

(c) 20.9 *l* = _____ *l* _____ m*l*

(d) 8.355 *l* = _____ *l* _____ m*l*

5. Express, as a decimal, in metres.

(a) 8 cm = _____ m

(b) 2 m 1 cm = _____

(c) 3 m 50 cm = _____ m

(d) 50.7 cm = _____ m

6. Express, as a decimal, in kilometres.

(a) 54 m = _____ km

(b) 804 m = _____ km

(c) 4 km 30 m = _____ km

(d) 10 km 100 m = _____ km

2. (a) 4 kg 126 g (b) 3 kg 30 g
(c) 30 kg 300 g (d) 19 kg 107 g
3. (a) 802 (b) 3700
(c) 5404 (d) 17 290
4. (a) 1 *l* 210 m*l* (b) 12 *l* 10 m*l*
(c) 20 *l* 900 m*l* (d) 8 *l* 355 m*l*
5. (a) 0.08 (b) 2.01
(c) 3.5 (d) 0.507

6. (a) 0.054 (b) 0.804
(c) 4.03 (d) 10.1

7. Express, as a decimal, in kilograms.

(a) 2 kg 300 g = _____ kg (b) 16 g = _____ kg

(c) 1 kg 206 g = _____ kg (d) 40 050 g = _____ kg

8. Express, as a decimal, in litres.

(a) 45 m*l* = _____ *l* (b) 1 *l* 40 m*l* = _____ *l*

(c) 2 *l* 6 m*l* = _____ *l* (d) 1580 m*l* = _____ *l*

9. Convert to the correct units.

(a) 0.6 m = _____ cm

(b) 2.72 km = _____ km _____ m

(c) 6.016 kg = _____ kg _____ g

(d) 5.57 *l* = _____ m*l*

10. Express as a decimal.

(a) 2400 g = _____ kg (b) 125 cm = _____ m

(c) 730 m*l* = _____ *l* (d) 21 090 m = _____ km

7. (a) 2.3 (b) 0.016
(c) 1.206 (d) 40.05
8. (a) 0.045 (b) 1.04
(c) 2.006 (d) 1.58
9. (a) 60 cm (b) 2 km 720 m
(c) 6 kg 16 g (d) 5570 m*l*
10. (a) 2.4 (b) 1.25
(c) 0.73 (d) 21.09

7.2

Level 2

Exercise 1

1. The sum of two numbers is 71.5. One of the numbers is 9 times as much as the other number. Find the two numbers.

(1) 1 unit = 7.15
9 units = 64.35

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2. 1 kg of fish cost $12.50 and 1 kg of mutton cost $8.75. Mr Ali bought 20 kg of fish and 30 kg of mutton. How much did he pay altogether?

(2) $512.50

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3. 800 identical water bottles contain 600 litres of water. If each bottle contains the same amount of water, how many litres of water does each water bottle contain?

(3) 0.75 ∫

4. A notebook costs $0.65. What is the cost of 3000 notebooks?

(4) $1950

(5) 12 150 kg

(6) 6.22 m

(7) 55 cm

5. 600 bags of flour were donated to the victims of a disaster in a neighbouring country. Each bag of rice had a mass of 20.25 kg. Find the total mass of the bags of flour.

*6. Find the total length of three ribbons, of length 2.4 m, 169 cm and $2\frac{1}{8}$ m. Give your answer in metres, correct to 2 decimal places.

7. A pipe of length 4.4 m was cut into 8 equal parts. Find the length of each part in centimetres.

8. At a party, Mrs Tay made 11 litres of fruit punch. She poured it equally into 40 cups. How many millilitres of fruit punch are there in each cup?

(8) 275 ml

(9) 6.55 m

(10) 16 kg 450 g

9. Rope A is 8.2 m long. Rope B is 165 cm shorter than Rope A. Find the length of Rope B. Give your answer in metres.

10. Mdm Teng bought 70 tomatoes. Each tomato had a mass of 235 g. Find the mass of all the tomatoes in kilograms and grams.

Exercise 2

Choose the correct answer and write its number in the brackets provided.

1. Ms Tan has 18.6 m of ribbon. She cuts it into 300 equal pieces. What is the length of each piece?
   (1) 0.062 m (2) 0.62 m
   (3) 55.8 m (4) 5580 m ( )

2. What is the value of 0.004 × 500?
   (1) 0.2 (2) 2
   (3) 20 (4) 200 ( )

3. The area of a rectangle is 350.6 cm^2. The length of the rectangle is 20 cm. Find its breadth.
   (1) 15.53 cm (2) 17.53 cm
   (3) 155.3 cm (4) 175.3 cm ( )

4. A sheet of paper is 0.07 cm thick. Find the thickness of 500 sheets of paper.
   (1) 35 cm (2) 350 cm
   (3) 3.5 m (4) 35 m ( )

*5. Find the total mass of 1.08 kg, 490 g and $1\frac{2}{7}$ kg. Give your answer correct to the nearest gram.
   (1) 1697 g (2) 1883 g
   (3) 1884 g (4) 2856 g ( )

*6. The difference between two numbers is 19.5. The larger number is 11 times as much as the smaller number. Find the larger number.
   (1) 8.5 (2) 21.45
   (3) 30.5 (4) 214.5 ( )

*7. A bottle contains 275 m*l* of lemon juice. How many bottles must you buy if you need 1.6 *l* of lemon juice?
   (1) 8 (2) 7
   (3) 6 (4) 5 ( )

8. Express 70 km 40 m in kilometres.
   (1) 70.4 km (2) 70.04 km
   (3) 70.004 km (4) 7.04 km ( )

9. Express 2 m 9 cm in centimetres.
   (1) 209 cm (2) 290 cm
   (3) 2009 cm (4) 2090 cm ( )

10. The height of a triangle is 50 cm. The base of the triangle is 18.25 cm. What is the area of the triangle?
   (1) 912.5 cm^2 (2) 456.25 cm^2
   (3) 68.25 cm^2 (4) 31.75 cm^2 ( )

(1) 1
(2) 2
(3) 2
(4) 1
(5) 4
(6) 2
(7) 3
(8) 2
(9) 1
(10) 2

7.3

Level 3

Exercise 1

1. The thickness of a book is 1.55 cm. If 80 identical books are stacked on top of one another, how high will the stack of books be? Give your answer in metres.

(1) 1.24 m

(2) 3 km 150 m

(3) 1.95 ∫

2. An old man walks for a distance of 450 m every day. What is the distance in kilometres and metres that he would walk in 1 week?

3. Container X has 750 m*l* of rose syrup. Container X has 0.45 *l* of rose syrup les than Container Y. Find the total amount of rose syrup in both containers Give your answer in litres.

4. A racing car travels 201.25 m in a minute. How many kilometres does it travel in an hour?

(4) 12.075 km

(5) 36.05 kg

(6) $60.45

5. The total mass of Azrul and Sam is 69.7 kg. Sam is 2400 g lighter than Azrul. Find Azrul's mass. Give your answer in kilograms.

For questions 6 to 10, you are allowed to use a calculator.

*6. Fanny has $55.80. She has 12 times as much money as Pat. How much money do the two girls have altogether?

*7. The Tan's family spent a total of $1505 on food in September and October. They spent $201.40 more in September than in October. How much money did they spend on food in October?

(7) $651.80

(8) $4.75

(9) 78 kg

*8. Mr Nasrun paid $72 for 9 cakes and 13 pies. A cake cost $2.50 more than a pie. Find the cost of each cake.

*9. The ratio of Hakim's mass to his father's mass is 8 : 11. They have a total mass of 134.9 kg. How heavy is Hakim's father? Give your answer correct to the nearest kilogram.

*10. The mass of Dickson's bag is five times the mass of Javier's bag. The mass of Ian's bag is half the mass of Javier's bag. Ian's bag has a mass of 850 g. Find the mass of Dickson's bag. Give your answer in kilograms and grams.

(10) 8 kg 500 g

Exercise 2:

(1) 1.4 m

(2) 255 m∫

Exercise 2

*1. A carpenter has a piece of wood of length 25 m. He cuts it into 18 equal pieces. Find the length of each piece in metres, correct to 1 decimal place.

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*2. Mr Tan made 18 litres of soya bean milk. He gave 4 litres to his friends. Then, he poured the remainder equally into 55 cups. How many millilitres of soya bean milk are there in each cup? Give your answer correct to the nearest millilitre.

3. To make 1*l* of orange juice, Mdm Wong mixed 300 m*l* of orange syrup with some water. How much water would there be in 15 litres of orange juice? Give your answer in litres and millilitres.

(3) 10 ∫ 500 m∫

(4) 2625 g

(5) 35.7 kg

4. The mass of a bag with some books is 3450 grams. The mass of the books is 1.8 kg more than the mass of the bag. Find the mass of the books in grams.

*5. Lucy's mass is 3.2 kg more than Evelyn's mass. Winnie's mass is 1.05 kg more than Lucy's mass. The three girls have a total mass of 104.95 kg. Find Lucy's mass.

*6. Molly spent a total of $100 on a blouse, a skirt and a bag. The blouse cost twice as much as the bag. The skirt cost $14.20 more than the bag. How much more did the blouse cost than the skirt?

(6) $7.25

(7) 1m 25 cm

(8) 2.36 kg

7. String A is 30 cm longer than String B. String A is 5 cm shorter than String C. The total length of the three strings is 3.35 m. Find the length of String C. Give your answer in metres and centimetres.

8. Mickey's luggage is 650 g heavier than Dave's luggage. The total mass of their luggage is 4.07 kg. Find the mass of Mickey's luggage.

9. $\frac{3}{10}$ of a number is 59.4. What is the number?

(9) 198

(10) 90

10. $\frac{7}{8}$ of a number is 78.75. What is the number?