CONTENTS

Exercise 1

1. If x = 4, y = -2 and z = 3 find:

   a. $4x + 3y - 2z$ b. $x^2 - 4y + 6z$

2. Solve 7x – 4 = 3x + 8

3. Evaluate: 6^2 – 2 x (5 - 6) showing working

4. Simplify 5a – 3 - 4a + 6

5. Round the following to 2 significant figures:

   a. 0.0000936 b. 178,764

6. Find 0.125 ÷ 0.005

7. Find $\frac{3}{7} \times \frac{1}{7}$

Exercise 2

1. If x = 4, y = -2 and z = 2 find:

   a. $5x + 3y^2 - 3z$ b. $x^2 + 2y + 5z$

2. Solve 4x – 2 = 6x + 3

3. Evaluate: 2^2 – 2 x (7 - 7) showing working

4. Simplify 4a + 8 – 10a – 5

5. Round the following to 3 significant figures:

   a. 0.01064 b. 5,784,984

6. Find 180 ÷ 0.02

7. Find $\frac{3}{7} \times \frac{4}{5}$

Exercise 3

1. If x = -5, y = -2 and z = 3 find:

   a. $zx + 2y^2$ b. $2x - 4y^2 + 4z$

2. Solve 7x – 5 = 9 - 6x

3. Evaluate: 9^2 – 2 x (4 - 7) showing working

4. Simplify 12a – 6 – 16a + 16

5. Round the following to 3 significant figures:

   a. 0.004809 b. 606,486

6. Find 0.032 ÷ 0.0004

7. Find $\frac{1}{6} \times \frac{3}{4}$

Exercise 4

1. If x = -5, y = -3 and z = 5 find:

   a. $2xy + 3z$ b. $3xyz$

2. Solve 4 – 3x = 8x + 7

3. E valuate: 7^2 – 4 x (5 - 7) showing working

4. Simplify 8a + 16 – 10 – 2a

5. Round the following to 3 significant figures:

   a. 6.5073 b. 1,086,483

6. Find 0.002 ÷ 0.00004

7. Find $\frac{5}{6} \times \frac{1}{5}$

CfE Outcomes	3-14a, 3-15a, 4-03b, 3-14a, 3-01a, 3-07a, 3-04a

Exercise 1

1. Convert each of these times to hours and minutes.
   (a) 2.3 hours (b) 3.6 hours
2. Convert each of these times to hours as a decimal
   (a) 5 hours 42 minutes (b) 9 hours 18 minutes
3. A plane travels at 520mph for 2.2 hours. Calculate the total distance travelled.
4. A car covers 220 miles in 4 hours 42 minutes. Calculate the average speed of the journey.
5. A boat travels 30miles at an average speed of [illegible]mph. Calculate the time taken in hours and minutes.

Exercise 2

1. Convert each of these times to hours and minutes.
   (a) 8.7 hours (b) 1.5 hours
2. Convert each of these times to hours as a decimal
   (a) 4 hours 54 minutes (b) 2 hours 6 minutes
3. A plane travels at 480mph for 5.4 hours. Calculate the total distance travelled.
4. A car covers 240 miles in 5 hours 36 minutes. Calculate the average speed of the journey.
5. A boat travels 20.4miles at an average speed of 6mph. Calculate the time taken in hours and minutes.

Exercise 3

1. Convert each of these times to hours and minutes.
   (a) 5.25 hours (b) $8\frac{2}{3}$ hours
2. Convert each of these times to hours as a decimal
   (a) 7 hours 36 minutes (b) 4 hours 3 minutes
3. A plane travels at 486mph for 3.6 hours. Calculate the total distance travelled.
4. A car covers 280 miles in 6 hours 18 minutes. Calculate the average speed of the journey.
5. A boat travels 34.2miles at an average speed of 9mph. Calculate the time taken in hours and minutes.

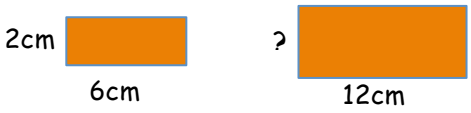
Exercise 4

1. Convert each of these times to hours and minutes.
   (a) $4\frac{1}{3}$ hours (b) 6.9 hours
2. Convert each of these times to hours as a decimal
   (a) 1 hour 9 minutes (b) 3 hours 12 minutes
3. A plane travels at 544mph for 5.9 hours. Calculate the total distance travelled.
4. A car covers 300 miles in 6 hours 54 minutes. Calculate the average speed of the journey.
5. A boat travels 16.1miles at an average speed of 7mph. Calculate the time taken in hours and minutes.

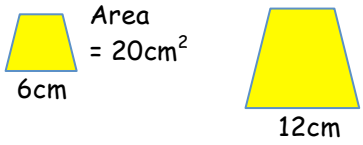
CfE Outcomes	4-10b

Exercise 1

1. These two rectangles below are similar. Find the length of the missing side.



2. The two trapeziums are similar. Calculate the area of the larger one.



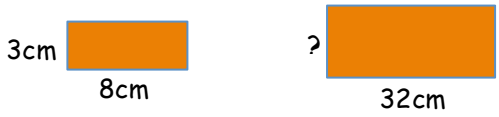
3. Change these times to hours and minutes
(a) 6.3 hours (b) 4.7 hours

4. Solve: 2(2x – 4) = 12

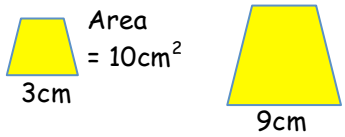
5. Find $\frac{3}{4} \div \frac{2}{5}$

Exercise 2

1. These two rectangles below are similar. Find the length of the missing side.



2. The two trapeziums are similar. Calculate the area of the larger one.



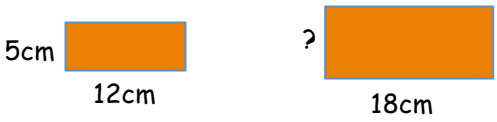
3. Change these times to hours and minutes
(a) 2.1 hours (b) 3.5 hours

4. Solve: 3(5x – 2) = 39

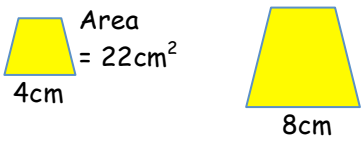
5. Find $\frac{2}{3} \div \frac{1}{7}$

Exercise 3

1. These two rectangles below are similar. Find the length of the missing side.



2. The two trapeziums are similar. Calculate the area of the larger one



3. Change these times to hours and minutes
(a) 9.6 hours (b) 2.8 hours

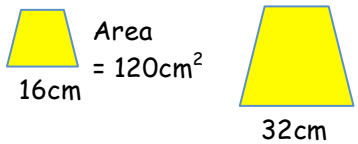
4. Solve: $4(6x - 1) = 20$

5. Find $\frac{2}{9} \div \frac{1}{4}$

Exercise 4

1. These two rectangles below are similar. Find the length of the missing side.

2. The two trapeziums are similar. Calculate the area of the larger one



3. Change these times to hours and minutes
(a) 10.25 hours (b) 6.75 hours

4. Solve: 3(7x + 2) = 48

5. Find $\frac{3}{5} \div \frac{1}{6}$

CfE Outcomes	4-17b, 4-15a, 4-10b, 4-07b