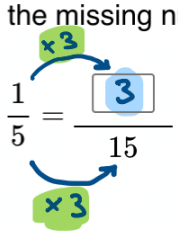
Equivalent Fractions

Exercise 3.1	No calculators are permitted in this exercise.	Name:

Worked Example for Simple Questions

Write the missing number to make an equivalent fraction.



* Work out what the denominator has been multiplied by, then use that to calculate the numerator.

Question 1

Write the missing number to make an equivalent fraction.

$$\frac{3}{5} = \frac{\square}{50}$$

Question 2

Write the missing number to make an equivalent fraction.

$$\frac{5}{8} = \frac{\square}{16}$$

Question 3

Write the missing number to make an equivalent fraction.

$$\frac{2}{5} = \frac{\square}{40}$$

Question 4

Write the missing number to make an equivalent fraction.

$$\frac{3}{10} = \frac{\square}{40}$$

Question 5

Write the missing number to make an equivalent fraction.

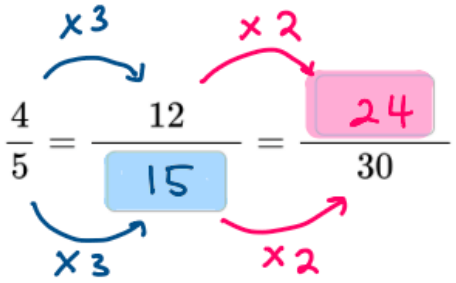
$$\frac{1}{2} = \frac{\square}{14}$$

Copyright © Maths Pathway 2026.

Worked Example for Standard Questions

Question

Write the missing numbers to make equivalent fractions.



Think : $4 \times ? = 12$ $\quad 4 \times \boxed{3} = 12$

Now, multiply the 5 by 3 also.

$5 \times 3 = 15$

Think : $15 \times ? = 30$ $\quad 15 \times \boxed{2} = 30$

Now, multiply the 12 by 2 also.

$12 \times 2 = 24$

Question 6

Write the missing numbers to make equivalent fractions.

$$\frac{2}{5} = \frac{\square}{20} = \frac{24}{\square}$$

Question 7

Write the missing numbers to make equivalent fractions.

$$\frac{2}{3} = \frac{\square}{9} = \frac{12}{\square}$$

Copyright © Maths Pathway 2026.

Equivalent Fractions

Question 8

Write the missing numbers to make equivalent fractions.

$$\frac{1}{3} = \frac{4}{\square} = \frac{\square}{60}$$

Question 9

Write the missing numbers to make equivalent fractions.

$$\frac{1}{5} = \frac{5}{\square} = \frac{\square}{75}$$

Question 10

Write the missing numbers to make equivalent fractions.

$$\frac{3}{5} = \frac{12}{\square} = \frac{\square}{40}$$

Copyright © Maths Pathway 2026.

Simplifying Fractions

Exercise 3.3	No calculators are permitted in this exercise.

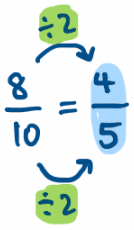
Worked Example for Simple Questions

Fully simplify: $\frac{8}{10}$

Hint: keep simplifying the fraction until you can't simplify anymore.

4

5



1. Divide numerator and denominator by a common factor
2. Keep dividing until there are no common factors except 1.

Question 1

Fully simplify: $\frac{15}{25}$

Hint: keep simplifying the fraction until you can't simplify anymore.

Fraction: ☐/☐

Question 2

Fully simplify: $\frac{10}{25}$

Hint: keep simplifying the fraction until you can't simplify anymore.

Fraction: ☐/☐

Copyright © Maths Pathway 2025.

Simplifying Fractions

Question 3

Fully simplify: $\frac{20}{35}$

Hint: keep simplifying the fraction until you can't simplify anymore.

Fraction: $\frac{\square}{\square}$

Question 4

Fully simplify: $\frac{22}{55}$

Hint: keep simplifying the fraction until you can't simplify anymore.

Fraction: $\frac{\square}{\square}$

Question 5

Fully simplify: $\frac{25}{40}$

Hint: keep simplifying the fraction until you can't simplify anymore.

Fraction: $\frac{\square}{\square}$

Copyright © Maths Pathway 2025.

Worked Example for Standard Questions

Question

Fully simplify the fraction.

$$\frac{18}{42} = \frac{3}{7}$$

÷6 ÷6

1. Find the highest common factor.
   18: 1, 2, 3, 6, 9, 18
   42: 1, 2, 3, 6, 7, 14, 21, 42
   HCF : 6
2. Divide both the numerator and denominator by the highest common factor.

   18 ÷ 6 = 3
   42 ÷ 6 = 7

Question 6

Fully simplify the fraction.

$$\frac{27}{36} = \frac{\square}{\square}$$

Question 7

Fully simplify the fraction.

$$\frac{12}{30} = \frac{\square}{\square}$$

Question 8

Fully simplify the fraction.

$$\frac{24}{32} = \frac{\square}{\square}$$

Question 9

Fully simplify the fraction.

$$\frac{18}{30} = \frac{\square}{\square}$$

Copyright © Maths Pathway 2025.

Question 10

Fully simplify the fraction.

$$\frac{30}{45} = \frac{\square}{\square}$$

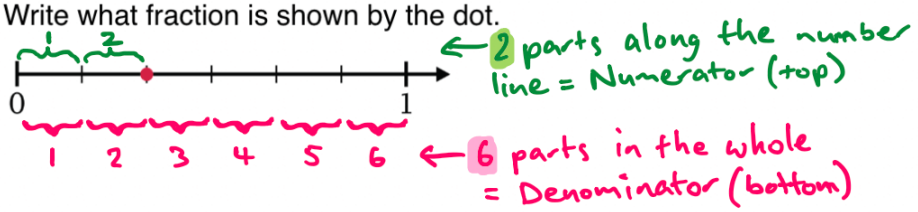
Copyright © Maths Pathway 2025.

Fractions Between 0 and 1

Exercise 3.5 No calculators are permitted in this exercise.

Worked Example for Simple Questions

Write what fraction is shown by the dot.



$\frac{2}{6}$

Question 1

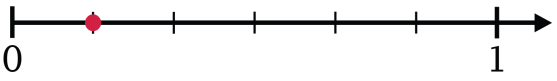
Write what fraction is shown by the dot.



Fraction: $\frac{\square}{\square}$

Question 2

Write what fraction is shown by the dot.



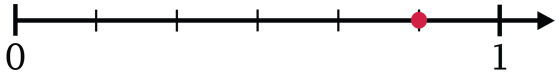
Fraction: $\frac{\square}{\square}$

Copyright © Maths Pathway 2025.

Fractions Between 0 and 1

Question 3

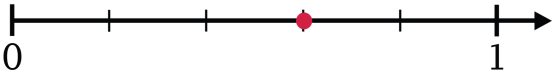
Write what fraction is shown by the dot.



Fraction: $\frac{\square}{\square}$

Question 4

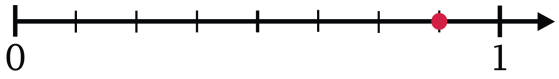
Write what fraction is shown by the dot.



Fraction: $\frac{\square}{\square}$

Question 5

Write what fraction is shown by the dot.

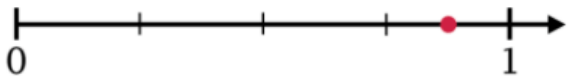


Fraction: $\frac{\square}{\square}$

Copyright © Maths Pathway 2025.

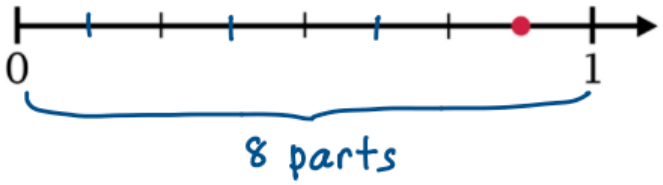
Worked Example for Standard Questions

What fraction is shown by the dot?

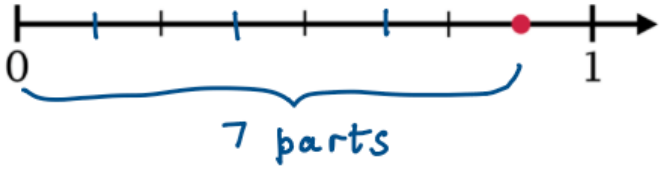


$\frac{7}{8}$

The number line is divided into quarters.
The dot is half way between two tick marks. Let's add tick marks half way between each tick mark.



There are now 8 parts.
The dot is 7 parts from zero.



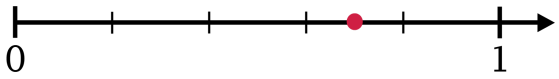
The fraction shown by the dot is $\frac{7}{8}$.

Copyright © Maths Pathway 2025.

Fractions Between 0 and 1

Question 6

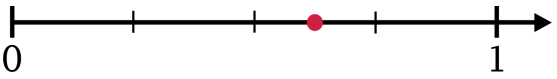
What fraction is shown by the dot?



Fraction: ☐/☐

Question 7

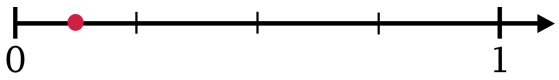
What fraction is shown by the dot?



Fraction: ☐/☐

Question 8

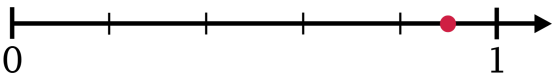
What fraction is shown by the dot?



Fraction: ☐/☐

Question 9

What fraction is shown by the dot?



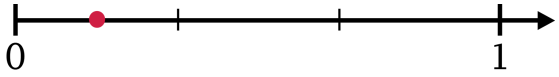
Fraction: ☐/☐

Copyright © Maths Pathway 2025.

Fractions Between 0 and 1

Question 10

What fraction is shown by the dot?



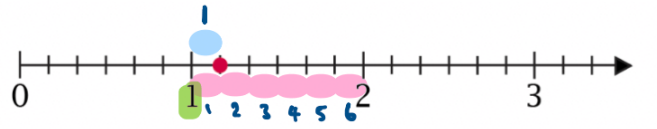
Fraction: $\frac{\square}{\square}$

Copyright © Maths Pathway 2025.

Fractions and Decimals Beyond 1 on Number Lines

Exercise 3.7	No calculators are permitted in this exercise.

Worked Example for Simple Questions



The dot is at:

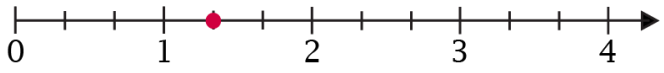
$1\frac{1}{6}$

A $1\frac{1}{6}$

B $1\frac{2}{7}$

C $1\frac{3}{8}$

Question 1



The dot is at:

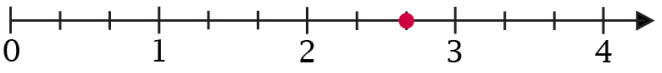
Circle the correct option

A $1\frac{1}{2}$

B $1\frac{5}{6}$

C $1\frac{1}{3}$

Question 2



The dot is at:

Circle the correct option

A $2\frac{2}{3}$

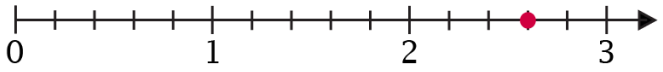
B $2\frac{3}{4}$

C $2\frac{4}{7}$

Copyright © Maths Pathway 2025.

Fractions and Decimals Beyond 1 on Number Lines

Question 3



The dot is at:

Circle the correct option

A

$2\frac{3}{5}$

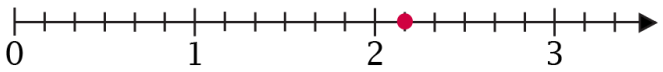
B

$2\frac{4}{6}$

C

$2\frac{2}{8}$

Question 4



The dot is at:

Circle the correct option

A

$2\frac{2}{5}$

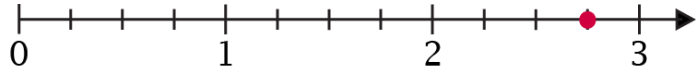
B

$2\frac{1}{6}$

C

$2\frac{3}{4}$

Question 5



The dot is at:

Circle the correct option

A

$2\frac{3}{4}$

B

$2\frac{2}{5}$

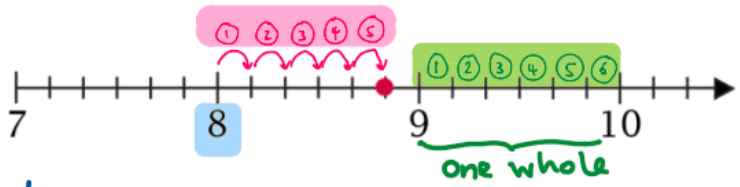
C

$2\frac{5}{6}$

Copyright © Maths Pathway 2025.

Worked Example for Standard Questions

Write the mixed number shown by the dot.



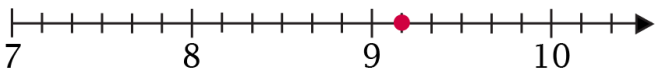
whole number → 8

$\frac{5}{6}$ ← 5: number of parts from the whole; 6: number of parts in one whole

The dot is to the right of which whole number? 8
How many parts is the dot from the whole? 5
How many parts in one whole? 6

Question 6

Write the mixed number shown by the dot.



$\square\ \frac{\square}{\square}$

Question 7

Write the mixed number shown by the dot.



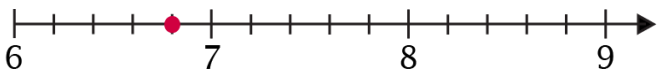
$\square\ \frac{\square}{\square}$

Copyright © Maths Pathway 2025.

Fractions and Decimals Beyond 1 on Number Lines

Question 8

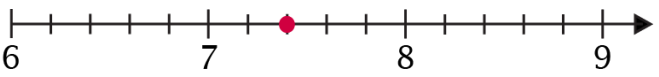
Write the mixed number shown by the dot.



□ □/□

Question 9

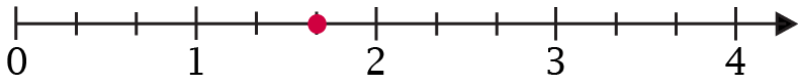
Write the mixed number shown by the dot.



□ □/□

Question 10

Write the mixed number shown by the dot.



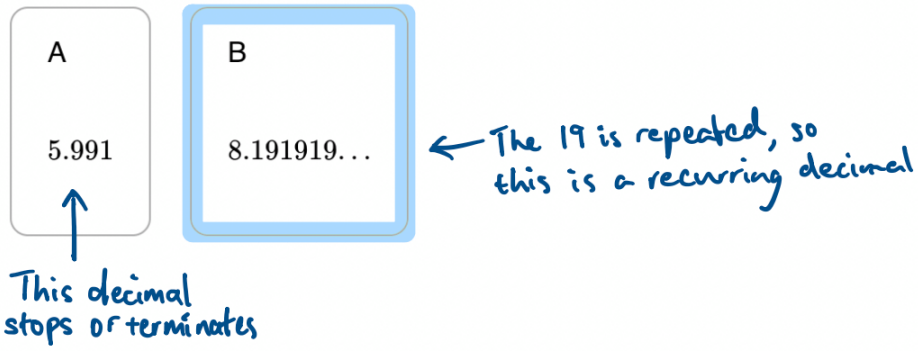
□ □/□

Copyright © Maths Pathway 2025.

Exercise 3.9 No calculators are permitted in this exercise.

Worked Example for Simple Questions

Which one is a **recurring** decimal?



Question 1

Which one is a **recurring** decimal?

Circle the correct option

A	B
$7.355555...$	2.454

Question 2

Which one is a **recurring** decimal?

Circle the correct option

A	B
$0.494949...$	1.335

Question 3

Which one is a **recurring** decimal?

Circle the correct option

A	B
0.113	$0.741111...$

Question 4

Which one is a **recurring** decimal?

Circle the correct option

A	B
$4.545454...$	9.337

Copyright © Maths Pathway 2025.

Question 5

Which one is a **terminating** decimal?

Circle the correct option

A

$0.32666666...$

B

8.006

Copyright © Maths Pathway 2025.

Worked Example for Standard Questions

Question

The decimal number $3.\overline{21}$ is:

A

recurring

B

terminating

$3.\overline{21}$ means the 21 repeats forever
3.21212121... etc

A dot over a number also means that number repeats.
e.g. $3.2\dot{1}$ means 3.2111111... etc.

Question 6

The decimal number 4.21 is:

Circle the correct option

A

recurring

B

terminating

Question 7

The decimal number $5.7\overline{61}$ is:

Circle the correct option

A

recurring

B

terminating

Copyright © Maths Pathway 2025.

Question 8

The decimal number $4.\overline{87}$ is:

Circle the correct option

A	B
recurring	terminating

Question 9

The decimal number $8.3\dot{7}$ is:

Circle the correct option

A	B
recurring	terminating

Question 10

The decimal number 0.07 is:

Circle the correct option

A	B
recurring	terminating

Copyright © Maths Pathway 2025.

Rounding Decimals

Exercise 3.11	No calculators are permitted in this exercise.

Worked Example for Simple Questions

Round 3.4286 to **two decimal places**.

Answer:

3·43

Look at the number after the 2nd decimal place,
if it is 5 or bigger then add 1 to the number
in the 2nd decimal place.
If it is 4 or smaller, leave it as it is.

* 8 is 5 or bigger, so we add 1 to the 2, 2+1=3

Question 1

Round 5.1273 to **two decimal places**.

Answer:

Question 2

Round 8.2792 to **two decimal places**.

Answer:

Question 3

Round 2.3582 to **two decimal places**.

Answer:

Question 4

Round 4.1393 to **two decimal places**.

Answer:

Copyright © Maths Pathway 2025.

Question 5

Round 7.3482 to **two decimal places**.

Answer:

Copyright © Maths Pathway 2025.

Worked Example for Standard Questions

Question

Round the number to the given number of decimal places.

7.95 (1 decimal place)

Answer:

8.0

1. Select the number of decimal places (to the right of the decimal point)
   7.95

2. Look at the number to the right.
   If it's less than 5, ignore it.
   If it's 5 or more, round the highlighted number up.
   7.95
   round the 9 up
   9 rounded up is 10
   So the 7.9 becomes 8.0

3. 8.0
   you need to include the zero so it's still got 1 decimal place.

Copyright © Maths Pathway 2025.

Question 6

Round the number to the given number of decimal places.

7.0097 (3 decimal places)

Answer:

Question 7

Round the number to the given number of decimal places.

37.05 (1 decimal place)

Answer:

Question 8

Round the number to the given number of decimal places.

7.567 (2 decimal places)

Answer:

Question 9

Round the number to the given number of decimal places.

0.0085 (3 decimal places)

Answer:

Question 10

Round the number to the given number of decimal places.

2.98 (1 decimal place)

Answer:

Copyright © Maths Pathway 2025.