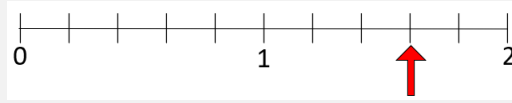


Lesson 10 – Converting Fractions and Decimals

Starter

- 1) Change $\frac{10}{3}$ to a mixed number
- 2) Change $4\frac{1}{3}$ to an improper fraction
- 3) What is this number?



4) Fill in the gaps

a) $\frac{?}{4} = 1$ b) $\frac{?}{6} = 2$ c) $\frac{48}{?} = 6$

Starter Answers

- 1) $3\frac{1}{3}$ 2) $\frac{13}{3}$ 3) $1\frac{3}{5}$ or $\frac{8}{5}$ 4) a) 4 b) 12 c) 8

Example 1

Convert to fractions. Simplify your answers.

1) 0.6

Which place value column is the 6 in?

The 6 is in the tenths column.

This means we have 6 tenths.

This can be written as $\frac{6}{10}$ which can be simplified to $\frac{3}{5}$

2) 0.34

We have 3 tenths and 4 hundredths

We can also say we have 34 hundredths

This is $\frac{34}{100}$ which can be simplified to $\frac{17}{50}$

3) 0.003

The 3 is in the thousandths column, meaning we have 3 thousandths

We can write this as $\frac{3}{1000}$

4) 3.4

We have 3 units and 4 tenths

The 4 tenths can be written as $\frac{4}{10}$ or $\frac{2}{5}$

So 3.4 can be written as $3\frac{2}{5}$ or $\frac{17}{5}$

Example 2

Convert to decimals

1) $\frac{4}{5}$

Change the fraction to an equivalent fraction with 10, 100 or 1000 as the denominator

$$\frac{4}{5} = \frac{8}{10}$$

This means we have 8 tenths

This can be written as 0.8

$$2) \frac{11}{20}$$

$$\frac{11}{20} = \frac{55}{100}$$

So we have 55 hundredths

This can be written as 0.55

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

$$\frac{1}{8} = \frac{125}{1000}$$

So we have 125 thousandths

This can be written as 0.125

Your go

1) Change into fractions and simplify your answers

a) 0.6

b) 0.24

c) 0.007

d) 4.56

2) Change into decimals

a) $\frac{3}{25}$

b) $\frac{3}{4}$

c) $\frac{23}{50}$

d) $\frac{7}{500}$

Answers

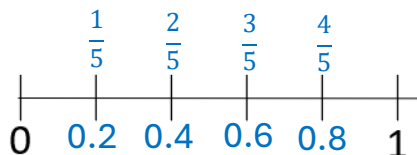
1) a) $\frac{3}{5}$ b) $\frac{6}{25}$ c) $\frac{7}{1000}$ d) $4\frac{14}{25}$ or $\frac{114}{25}$

2) a) 0.12 b) 0.75 c) 0.46 d) 0.014

We can also use a **number line** to convert between fractions and decimals

Example 3

Change 0.4 to a fraction.



We can see that this number line is split into 5 equal sections. This means we are counting up in fifths.

So, we can see that $0.4 = \frac{2}{5}$