

Fractions, decimals and percentages

Expressing fractions and decimals as percentages

Fractions as decimals

1 Write each of the following fractions as decimals.

1a $\frac{1}{2}$

1b $\frac{3}{4}$

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

1d $\frac{9}{20}$

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1e $\frac{7}{10}$

1f $\frac{3}{100}$

1g $\frac{19}{100}$

1h $\frac{23}{50}$

1i $\frac{7}{25}$

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Terminating and recurring decimals

- 2 Which of the following fractions terminate?
Predict the outcome before converting each fraction.

$$\frac{1}{2} \quad \frac{1}{3} \quad \frac{1}{4} \quad \frac{1}{5} \quad \frac{1}{6} \quad \frac{1}{7} \quad \frac{1}{8} \quad \frac{1}{9} \quad \frac{1}{10} \quad \frac{1}{15} \quad \frac{1}{16} \quad \frac{1}{20}$$

Decimals as fractions

- 3 Write each of the following decimals as a fraction in its simplest form.

3a 0.5

3b 0.25

3c 0.4

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3d 0.7

3e 0.62

3f 0.44

3g 0.37

3h 0.04

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3i 0.05

Converting recurring decimals to fractions

4 Convert the following recurring decimals to fractions.

4a $0.55555\dots =$

answer

4b $0.424242\dots =$

answer

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4c 0.123451234512345...

answer

4d 0.007007007007...

answer

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4e 3.777...

answer

Common conversions

5 Complete the table

Fraction	Decimal	Percentage
$\frac{1}{2}$	<input type="text"/>	<input type="text"/> %
<input type="text"/>	0.1	<input type="text"/> %
<input type="text"/>	<input type="text"/>	25%
<input type="text"/>	0.75	<input type="text"/> %
$\frac{1}{5}$	<input type="text"/>	<input type="text"/> %
<input type="text"/>	<input type="text"/>	1%
$\frac{1}{3}$	<input type="text"/>	<input type="text"/> %

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6 Write each of the following fractions as a percentage.

6a $\frac{3}{20}$

6b $\frac{11}{25}$

6c $\frac{7}{10}$

6d $\frac{1}{4}$

6e $\frac{3}{25}$

6f $\frac{5}{40}$

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Converting a percentage to a fraction

7 Write the following percentages as fractions in their simplest form:

7a 75%

7b 10%

7c 95%

7d 34%

7e 80%

7f 4%