

# Express one number as a fraction or percentage of another without a calculator



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1. Write the first quantity as a fraction and a percentage of the second quantity.

- a) 17 m, 20 m
- b) £16, £25
- c) 3 cm, 50 cm
- d) £130, £1 000
- e) 650 g, 1 kg

2. Brett has a £20 note. He spends £3 on lunch and £8 on a book.

- a) What fraction of his money does he have left?
- b) What percentage of his money does he have left?



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3. Tommy says

I got 28 out of 40 in my geography test. I can't turn this into a percentage without a calculator because 40 isn't a factor of 100.

Show that Tommy is wrong.

4. A 400 g bar of Nutty chocolate, contains 120 g of nuts.

A 260 g bar of Nutz chocolate, contains 91 g of nuts.



Which bar contains a higher percentage of nuts?  
Explain your answer.



# Answers



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1. Write the first quantity as a fraction and a percentage of the second quantity.

- a) 17 m, 20 m      85%
- b) £16, £25      64%
- c) 3 cm, 50 cm      6%
- d) £130, £1 000      13%
- e) 650 g, 1 kg      65%

2. Brett has a £20 note. He spends £3 on lunch and £8 on a book.

- a) What fraction of his money does he have left?  $\frac{9}{20}$
- b) What percentage of his money does he have left? 45%



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3. Tommy says

I got 28 out of 40 in my geography test. I can't turn this into a percentage without a calculator because 40 isn't a factor of 100.

Show that Tommy is wrong.

$$\frac{28}{40} = \frac{14}{20} = \frac{70}{100} = 70\%$$

Tommy got 70% in his test.

4. A 400 g bar of Nutty chocolate, contains 120 g of nuts.



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A 260 g bar of Nutz chocolate, contains 91 g of nuts.

Which bar contains a higher percentage of nuts?

Explain your answer.

Nutz bar contains 35% of nuts.

$$\text{Nutty } \frac{120}{400} = 30\%, \text{ Nutz } \frac{91}{260} = 35\%$$

