Percentages and Fractions of Amounts

Main Curriculum References

Number 2 – Fractions, Decimals and Percentages

Level 1

N2/L1.2 – Find parts of whole number quantities
N2/L1.3 – Recognise equivalencies between common fractions, percentages and decimals
N2/L1.9 – Find simple percentage parts of quantities and measurements

Level 2

N2/L2.2 – Identify equivalencies between fractions, percentages and decimals
N2/L2.8 – Find percentage parts of quantities and measurements

Contributor's notes

I find that many of my students have learnt how to solve percentage problems on a calculator but struggle with % problems when not allowed to use one. They tend to 'go through' a method rote without understanding and therefore miss quick ways they might manage even in their heads.

This sheet was designed to review use of fractions when working out % parts. We had already covered:

- unitary fractions - divide by the bottom number only
- other fractions - divide by the bottom and times by the top
- using half and half again to find ¼

The sheet also provides opportunity to discuss problems in real life requiring real life solutions. One doesn't want to have half a person or half a pence! Remind students to check their answers make sense.

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Percentages and Fractions of Amounts

Remember that a percentage can be turned into a fraction.
Fill out the table to help you complete the questions.

Percent	Fraction	divide by	Multiply by
25%			n/a
50%			n/a
10%			n/a
75%			
30%			

Turn the % into a simple fraction to help solve these problems.

1) Find 50% of £4.56

2) Find 50% of £1.17

3) Find 75% of 45

4) Find 50% of 3.6

5) Find 25% of 12.16

6) A store is holding a sale. All the items will have 50% off.
What will be the sale price of a TV costing £1499?

7) Ali is a bricklayer. He gets a 25% discount on his supplies. He orders a big supply of bricks at the normal price of £3, 782.
How much will he actually pay?

8) 42,548 people attend a football match. Of these, 75% are the home supporters.
How many of those attending were away supporters?

9) Of the 86 students who are on an arts course only 25% of them are male.
How many female students are on an arts course?

10) 316 people were asked which colour they would paint their front door.
25% of them said red, 50% of them said blue and the rest said brown.
How many people would paint their door brown?

This resource was kindly contributed by Jean Thomas, The Henley College. jean@jeanthomas.co.uk
N2/L1.2, N2/L1.3, N2/L1.9; N2/L2.2, N2/L2.8.

Percentages and Fractions of Amounts
Answer Sheet

Remember that a percentage can be turned into a fraction.
Fill out the table to help you complete the questions.

Percent	Fraction	divide by	Multiply by
25%	1/4	4	n/a
50%	1/2	2	n/a
10%	1/10	10	n/a
75%	3/4	4	3
30%	3/10	10	3

Turn the % into a simple fraction to help solve these problems.

1) Find 50% of £4.56 £2.28

2) Find 50% of £1.17 58.5p or £0.585 discuss 1 /2 pence

3) Find 75% of 45 33.75

4) Find 50% of 3.6 1.8

5) Find 25% of 12.16 3.04

6) A store is holding a sale. All the items will have 50% off. What will be the sale price of a TV costing £1499? £749.50

7) Ali is a bricklayer. He gets a 25% discount on his supplies. He orders a big supply of bricks at the normal price of £3, 782. How much will he actually pay? £2836.50

8) 42,548 people attend a football match. Of these 75% are the home supporters. How many of those attending were away supporters? 10637

9) Of the 86 students who are on an arts course only 25% of them are male. How many female students are on an arts course? 64.5 Point out this would be impossible! discuss and use rounding to make the answer fit real world

10) 316 people were asked which colour they would paint their front door. 25% of them said red, 50% of them said blue and the rest said brown. How many people would paint their door brown? 79

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N2/L1.2, N2/L1.3, N2/L1.9; N2/L2.2, N2/L2.8.