

Knowledge Organiser: Percentages

What you need to know:

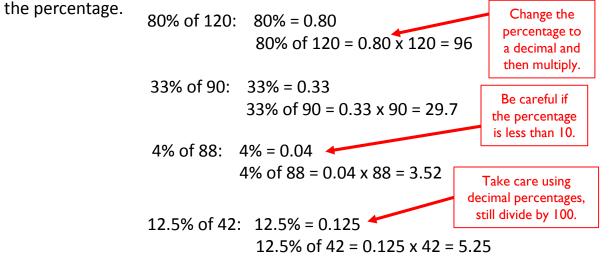
Percentage of an amount – Non calculator To calculate any percentage it is useful to start with 10%.

30% of 120: $10\% = 120 \div 10 = 12$ $30\% = 3 \times 12 = 36$ To find 10% we divide by 10. To find 30% we multiply 10% by 3.

- 45% of 80: $10\% = 80 \div 10 = 8$ $5\% = 8 \div 2 = 4$ $40\% = 4 \times 8 = 32$ 45% = 40% + 5% = 32 + 4 = 365% is half of 10% so we divide by 2.
 - To find 1% we divide the starting amount by 100. 1% of $30 = 30 \div 100 = 0.3$.

Percentage of an amount – Calculator

When we have a calculator we can use a multiplier; this is the decimal equivalent of



Key Terms:

Percentage: Out of one hundred.
Decimal: A decimal is a fraction written in a special form e.g. 0.6.

Multiplier: This is used to calculate percentages when we have a calculator.

Increase: When an amount goes up.

Decrease: When an amount goes down.

Simple interest: The amount of interest is fixed over period of time.

Compound interest: The interest earned over time will continue to increase.

Hegarty maths clip numbers Percentage of Amount: 84 – 87 Percentage Increase/Decrease: 88 – 90 Simple and Compound Interest: 91 – 94

You need to be able to:

- Calculate a percentage of an amount.
- Use a multiplier to calculate a percentage of an amount.
- Calculate a percentage increase.
- Calculate a percentage decrease.
- Calculate simple interest.
- Calculate compound interest.

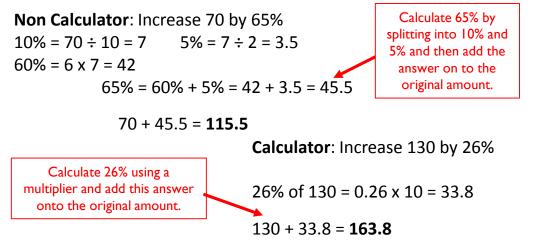


Knowledge Organiser: Percentages

What you need to know:

Percentage increase and decrease

Increase: To calculate a percentage increase we calculate the percentage and add the value on to the original amount.



Decrease: To calculate a percentage decrease we calculate the percentage and subtract the value off the original amount.

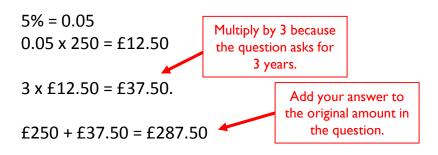
Non Calculator: Decrease 20 by 35%

$$10\% = 20 \div 10 = 2$$
 $5\% = 2 \div 2 = 1$
 $30\% = 3 \times 2 = 6$
 $35\% = 30\% + 5\% = 6 + 1 = 7$
 $20 - 7 = 13$
Calculator: Decrease 65 by 14%
Calculate 14% using a multiplier
and subtract this answer off the
original amount.
 14% of $65 = 0.14 \times 65 = 9.1$
 $65 - 9.1 = 55.9$

Simple interest

To calculate simple interest we start by calculating the percentage and multiplying it by the period of time.

Example: £250 is in a bank account which is paying 5% simple interest per year. How much will be in the bank account at the end of 3 years?



Compound interest

To calculate compound interest we use powers as the amount changes at the end of each year.

Example: £250 is in a bank account which is paying 4% compound interest per year. How much will be in the bank account at the

