Education begins at home

Maths resources for parents

Key Stage 3 - 11 to 14 year olds

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Introduction

These resources are to be used in conjunction with our online videos which can be found at www.facebook.com/beginsathome. The resources are intended for parents and carers who wish to support their child with maths at home. There are a number of different methods used by teachers across the curriculum, so always check with your child's maths teacher which method is relevant.

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Key Stage 3 - 11 to 14 year olds
Fractions

Lowri took 3/8 (three eighths) of a punnet of strawberries and Sara took 2/5 (two fifths) of the punnet. Between them what fraction of the strawberries do Lowri and Sara have?

$$\frac{3}{8}$$

← **Numerator**

← **Denominator**

Multiply the denominators 8 x 5 = 40

Cross multiplication 5 x 3 = 15
8 x 2 = 16

15 + 16 = 31

$$\frac{3}{8} \quad \frac{2}{5} \quad = \quad \frac{15 + 16}{40} \quad = \quad \frac{31}{40}$$

Therefore they have 31/40 of the strawberries between them.

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Decimals

A rectangular cupboard measures 0.8m by 0.9m. What is the area of the floor of the cupboard?

This is a multiplication of 0.8 and 0.9 to find the area.

0.8 x 0.9

Change this to a sum we know

8 x 9 = 72

We have made both the 0.8 and 0.9 ten times bigger so we now need to move the decimal points back in.

8 x 0.9 = 7.2

0.8 x 0.9 = 0.72 m²

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Percentages

A bike has increased in value by 40%. It's original value was £255. What is the new value?

40% is the same as 10% + 10% + 10% + 10%

10% of £255 is £25.50

40% = £102

The bike has increased in value:

£255 + £102 = £357

So the value of the bike is now £357.

Key Stage 3 - 11 to 14 year olds
Ratios

Marian makes a fruit smoothie made up of fruit and 150 ml of yogurt mixed with 1.5litres of milk. Marian has 450ml of fruit smoothie. How much milk will she need?

1 litre = 1000ml
1.5 litres = 1500ml

Yogurt : Milk
150 ml : 1500 ml

450 ml   ?

$450 \div 150 = 3$

Yogurt : Milk
150 ml : 1500 ml

x3   **x3**

450 ml   1500 ml x 3
**   = 4500 ml**

So Marian will need 4500ml of milk to make this fruit smoothie. This can also be written as 4.5 litres.

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Useful information

Ask your child's teacher about the latest apps, games and websites to help your child with maths, here are some suggested apps and websites.

Apps and Games

MathRef*
The MathPage*
Tiwtor Mathemateg
Ap Sgîl-iau
Welsh apps with fun maths activities - www.ginormous.solutions/cym

Websites

Hwb – The learning platform, full of useful resources.
http://hwb.wales.gov.uk
National Numeracy* – The National Numeracy Family Maths Toolkit is full of ideas and free activities to help families enjoy maths together.
http://www.nationalnumeracy.org.uk/family-maths-toolkit
Bitesize – The BBC's free online resource to help children in the UK with their school work, search by subject. www.bbc.co.uk/bitesize
Top Marks* – Useful website with maths calculations, search by age and topic. http://www.topmarks.co.uk/maths-games
WJEC – Useful maths resources including past exam papers.
http://www.wjec.co.uk/students/past-papers
Mathemateg – A Welsh site full of resources to help your child with their maths. http://www.mathemateg.com
Mathemateg Sylfaenol – A useful Welsh site with maths resources.
http://www.14-19nw.org.uk

*Please note these are only available in English

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