

Year 8 Information Evening Welcome



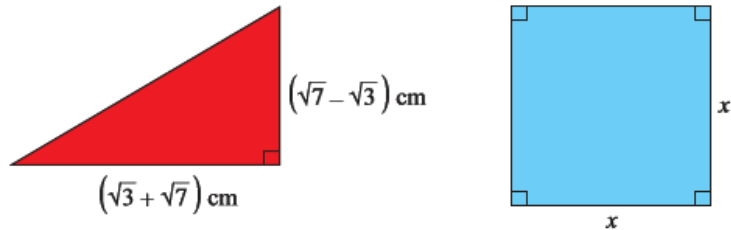


Mastery in Mathematics and Creating Independent Learners



What do we mean by Mastery in Mathematics?

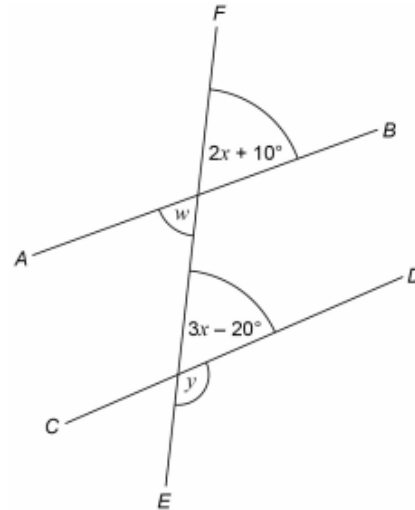
★ Making Links



Find the exact value of x if the area of the square is equal to the area of the triangle.



AB , CD and EF are straight lines.



Not drawn accurately

- (a) Ava assumes that AB and CD are parallel.
What answer should she get for the size of angle y ?

[4 marks]



Consider this...

$$0.72 \times 47.5 + 2.8 \times 4.75$$





**How about if I change the sum using
this information...**

$$0.72 \times 47.5 + 2.8 \times 4.75$$

$$7.2 \times 4.75 + 2.8 \times 4.75$$


$$400 \times 2 = 40 \times 20 = 4 \times 200$$

How many 'lots' of 4.75 do I have now?





This looks easier

$$0.72 \times 47.5 + 2.8 \times 4.75$$

$$7.2 \times 4.75 + 2.8 \times 4.75$$

How many 'lots' of 4.75 do I have now?

10 × 4.75... So much nicer!!

$$400 \times 2 = 40 \times 20 = 4 \times 200$$





**So, using our understanding of number
we can say that**

$$0.72 \times 47.5 + 2.8 \times 4.75 =$$

47.5





Developing your independent learning skills...

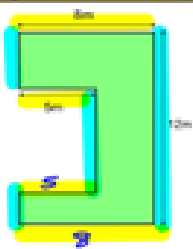


Step 1:

Watch the video, take notes of all modelled examples.


Perimeter (4)

Example
Work out the perimeter of this shape.

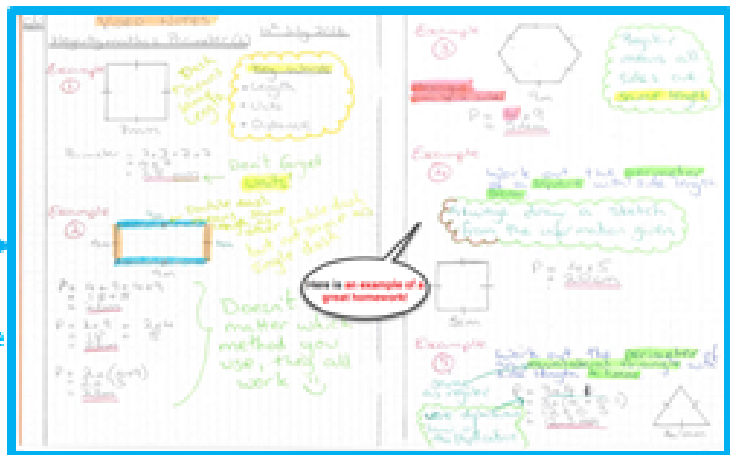


$2 \times 10 = 20m$

$8 + 5 + 5 + 8 = 26m$



You will turn each video into fantastic notes in your exercise books.



Example 1: Square with side length 5. Perimeter = $4 \times 5 = 20$.

Example 2: Rectangle with length 4 and width 3. Perimeter = $2 \times (4 + 3) = 14$.

Example 3: Hexagon with side length 3. Perimeter = $6 \times 3 = 18$.

Example 4: Triangle with base 4 and height 3. Perimeter = $4 + 3 + 5 = 12$.

Don't forget to use the correct units!

Don't matter which method you use, they all work!

Here is an example of a great homework!

You will always produce a set of well-written notes of all the modelled examples in the video as we want you to be an expert note-taker and to revise before you try the quiz. If you know the material, you still have to take the notes as sometimes you have to revise topics you already know and it's good for your long-term maths memory.



Empowering YOU to become an amazing independent learner in maths...

Step 2:

Assess your learning from the video in a quiz.

The screenshot shows a quiz interface for 'Geometry & Measure' with a sub-section 'Perimeter' and a question 'Q1 - Perimeter (3)'. The question asks to 'Work out the perimeter of the shaded shape.' The shape is a green T-shape with a top horizontal bar of width 4cm and height 3cm, and a vertical stem of width 6cm and height 6cm. A red play button icon is overlaid on the shape. Below the diagram, it says 'The diagram is not drawn to scale.' There is an input field with '0m' and a 'Check' button. On the right, there are options: 'Do not use a calculator' (checked), 'Show steps' (checked), and 'Do even help' (unchecked).

You need to:

- 1) Write down every Q
- 2) Always show all your workings
- 3) Always mark + self-correct your work

The whiteboard notes are as follows:

- 1) Perimeter of square shape** (Note: 'No calculator')
A square with side length 2cm.
4 sides, all with single class to square.
 $P = 4 \times 2 = 8\text{cm}$ ✓
- 2) Perimeter of rectangle shape?**
A rectangle with length 6cm and width 2cm.
Rectangle
 $P = (2 \times 6) + (2 \times 6) = 12 + 12 = 24\text{cm}$ ✓
- 3) Perimeter of regular shape?**
A regular hexagon with side length 5cm.
6 equal sides → Hexagon
 $P = 6 \times 5 = 30\text{cm}$ ✓

You will always show your workings and mark all questions you ever do. If you can do the question in your head you still need to show your workings as that is part of being a great mathematician.

What to do if you are stuck?

The screenshot shows the HegartyMaths interface for a lesson titled "Area of sector (2)". At the top right, it says "547 - Area of a sector (2)" with a progress indicator showing 10% completion. Below this is a "Continue quiz" button. The main content area features a video player with a play button. Below the video player is a "Building blocks" section with three lessons:

- 546 - Area of a sector (1)**: A red progress bar indicates 10% completion. A red status icon is shown.
- 547 - Triangles (1)**: A green progress bar indicates 100% completion. A green status icon is shown.
- 56 - Round decimal numbers**: An orange progress bar indicates 10% completion. An orange status icon is shown.

1) Watch the video again really carefully ensuring all examples are copied and see if hearing and writing it down a second time helps.

2) Look at your building blocks. These are the lessons that will help you with your current homework. If these are not at 100% or less than the HegartyMaths avg. then you should redo those them as it will help on your current work.

In the picture, the student will struggle with homework 547 as they have only 10% on lesson 546.

What to do if you are stuck?

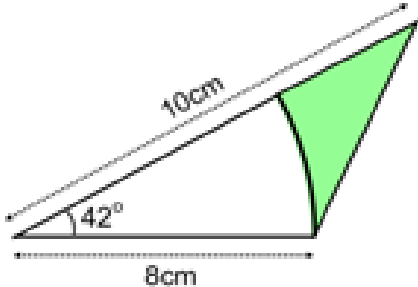
hegartymaths

Geometry & measure > Circle measure > SAT - Area of a sector (2) > Quiz

1 2 3 4 5

Start

Find the area of this green shaded section.
Give your answer rounded to 3 SF.



The diagram is not drawn to scale.


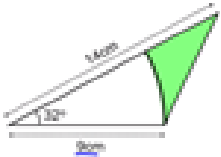
cm²

Watch video

Area of a sector (2)

Area of sector (2)

Example
Find the shaded area.
Give your answer to 1 decimal place.

Solved:  

$$= \frac{1}{2}(10)(10)\sin(30) = \frac{25}{2} = 12.5 \text{ cm}^2$$
$$= 10.8 \text{ cm}^2$$

$= 10.8 \text{ cm}^2$

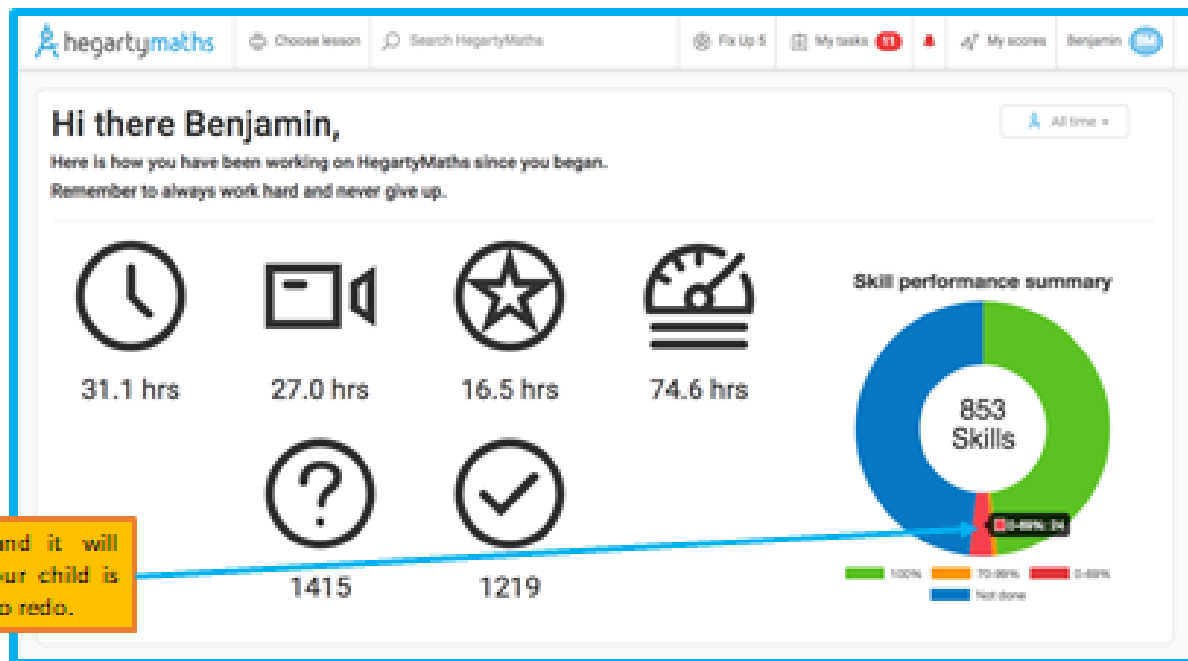
TALK TO US... We have Digit Doctors and in addition to that, the Maths department are always to happy be asked about Maths!! If you send us a question through Hegartymaths we can also help you by giving you feedback on your work.

Why do I have to always watch the video?

- 1) **Ensures you will be successful:** Watching the video will ensure you will do well in the quiz and feel good about your homework and maths. We don't want you to feel like you're on your own at home and the videos will give you the support you need to be successful with your homework.
- 2) **Your memory:** Copying down modelled examples helps you remember your maths and get it into your long term memory.
- 3) **Method marks:** Copying down modelled examples helps you practise how to lay out your maths properly to help you get questions correct and get extra method marks in exams even when you make mistakes.
- 4) **Good revision:** You are revising. When you are revising you sometimes have to look over material you already know – that's good for you. Revision isn't always just looking over stuff you struggle with.
- 5) **Your teacher thinks it's important:** Each week your teacher will inspect the book to be sure you are practising how to write your maths down as this is just as important as attempting questions.

What if your child has completed all homework – what else could they do?

1) Use their donut to improve their weak areas: Your child can click the red section to find the quizzes they need to improve (**quizzes under 70%**) and redo them until they are amber (**quizzes over 70%**) or green (**quizzes at 100%**). Once they have made everything green or amber go back over the amber and try to get them to green.



What happens when students use HegartyMaths properly?

- 1) Students start enjoying maths and understand more in lessons.
- 2) Students like doing their homework as they feel successful.
- 3) Students do well in their exams.

hegartymaths

Here is how you have been working on HegartyMaths this year!
Remember to always work hard and never give up.



89.9 hrs



14.2 hrs



10.6 hrs



114.7 hrs

Skill performance summary



673 Skills



7959



7509

This girl spent 89 hours on quizzes, 14 hours on videos and 10 hours doing Fix Up 5. She completed all lessons on the site at 100% and got a grade 9 having been predicted a 5.

“Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content.”

National Curriculum: Mathematics Programmes of Study, 2013



Mathematics is like building a logical pyramid – one shaky layer and everything built on top is likely to come crashing down. But often a subject that seemed impossible at first suddenly starts clicking into place when you come back to it for the second time.

Marcus du Sautoy

We all have the potential to be fabulous Mathematicians if we have the belief that we can do it and the resilience to never give up... Your teachers believe that you can do it, so now it is down to you!

Mrs Todman October 2018

“The most able do have an excellent working memory, they are able to recall facts and tricks but still lack a real conceptual understanding”

PiXL Conference October 2018 talking about the

importance of a mastery approach



How can you support your child?

There are a lot of websites with really useful resources:

Corbett maths: <https://corbettmaths.com/contents/>

Mr Barton Maths: <http://www.mrbartonmaths.com/>

Hegarty maths: <http://www.hegartymaths.com/>

PiXL Maths App: <https://mathsapp.pixl.org.uk/>



“Children and young people who use Accelerated Reader tend to enjoy reading more, do it more often and think more positively about reading than their peers who do not use Accelerated Reader. They are also more likely to see a link between reading and their successes.”

Dr Christina Clark, National Literacy Trust





What is Accelerated Reader?

At its heart, Accelerated Reader is simple.

A student reads a book, takes an online quiz, and gets immediate feedback. Students respond to regular feedback and are motivated to make progress with their reading skills.

<http://www.renlearn.co.uk/accelerated-reader/>

<http://www.renlearn.co.uk/accelerated-reader/sample-quizzes/>





The dos and don'ts of encouraging your child to read

- ❖ Do fill your house with reading materials like magazines and books.
- ❖ Don't nag them about reading.
- ❖ Do set an example by reading for pleasure yourself.
- ❖ Don't make a big deal out of their reading.
- ❖ Do let them choose their own books.
- ❖ Don't criticise what they read.
- ❖ Do look for books that interest them.



Helping your child



- Keep trying new books, even if they lose interest in reading at points.
- Model reading at home.
- Do not be afraid to let them read about tricky subjects.
- Look for ways to attract them to the library.
- All students are expected to read and bring in books for tutor time/library lesson.
Talk to them about what they will bring.
- Get someone they respect to talk to them about reading.

Useful links for book recommendations: <https://ukla.org/news/story/longlists-announced-for-the-2018-ukla-book-awards>

<http://www.carnegiegreenaway.org.uk/>

<http://www.arbookfind.co.uk/>

