

Stoke Newington School  
& Sixth Form

Maths department expectations for home learning

# Expectations of students:

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1. Check Hegarty maths for each week's work – there will be 4 hours of maths work per week (5 for Y12 and 13)
2. Complete work in your maths book each day you would usually have a maths lesson (see later slide for details)
3. Email your teacher if you need support with any work

# Expectations of teachers:


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1. Teachers will check at the end of each day that you have completed maths work for that day's lesson
2. Teachers will provide daily feedback on your work through Hegarty maths
3. Teachers will reply to your emails within 24 hours (Monday – Friday)
4. Teachers will award 3 achievement points per lesson – these will be given out on a Monday, following the previous week's work
5. Teachers will follow up with parents for incomplete work

## Our weekly routines...

1	You will be set 4 Maths lessons a week.
2	Your teacher will choose the lesson they want you to learn. This will be differentiated for students. You may not be doing the same activity as another student in your class.
3	You need to spend <b>between 30 minutes and 1 hour</b> on your work as this shows effort and commitment and will ensure that you do quality work.
4	You will always be expected to <ul style="list-style-type: none"><li>i) watch the video + take notes;</li><li>ii) write down your quiz workings neatly;</li><li>iii) mark your own work, make corrections and write down your score at the end.</li></ul>
5	Work will be checked by your teacher online and followed up with you, your parents and carers. Written work and notes will be checked upon your return to school.

# What does a home learning on HegartyMaths look like?

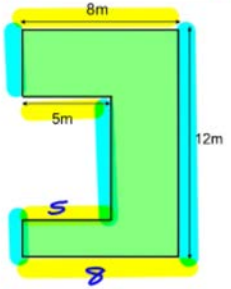


## Perimeter (4)

**Example**  
Work out the perimeter of this shape.

$2 \times 12 = 24m$

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




## 551 - Perimeter (4)

Learn how to find the perimeter of a compound shape.

Video watched 0.00x

Your score **New lesson** HegartyMaths avg 60%

 **Do quiz**

### Step 1:

Video where Mr. Hegarty teaches you everything you need to know about that topic & goes through all the examples that will be in the quiz.

### Step 2:

Quiz that will allow you to practise all the examples in the video for yourself and know whether you understood what was in the video.

# Step 1:

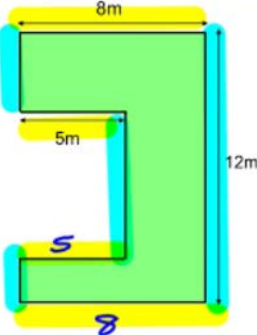
Watch the video, take notes of all modelled examples.

### Perimeter (4)

**Example**  
Work out the perimeter of this shape.

$2 \times 12 = 24m$

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

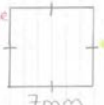


You will turn each video into fantastic notes in your HegartyMaths homework books.

### VIDEO NOTES

14<sup>th</sup> July 2016  
HegartyMaths: Perimeter (2)

**Example ①**



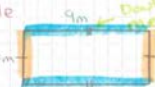
Perimeter =  $7 + 7 + 7 + 7$   
 $= 4 \times 7$   
 $= 28m$

**Key Words**

- Length
- Units
- Distance

**Don't forget units!**

**Example ②**




Perimeter =  $4 + 9 + 4 + 9$   
 $= 18 + 8$   
 $= 26m$

Perimeter =  $2 \times 9 + 2 \times 4$   
 $= 18 + 8$   
 $= 26m$

Perimeter =  $2 \times (4 + 9)$   
 $= 2 \times 13$   
 $= 26m$

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

**Example ③**



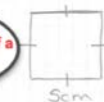
Perimeter =  $6 \times 9$   
 $= 54m$

**Regular means all sides are same length**

**Example ④**

Work out the perimeter of a square with side length 5cm.

Always draw a sketch from the information given.



Perimeter =  $4 \times 5$   
 $= 20cm$

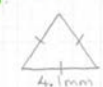
**Example ⑤**

Work out the perimeter of an equilateral triangle with side length 4.1mm.

Same as regular

Perimeter =  $3 \times 4.1$   
 $= 12.3mm$

Use distributive law or multiplication



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.

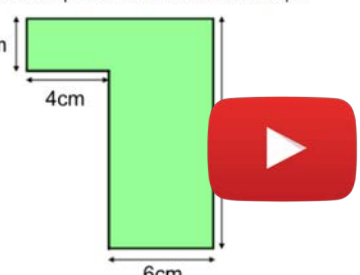
## Step 2:

Assess your learning from the video in a quiz.

Geometry & measure > Perimeter > 551 - Perimeter (4) > Quiz

1 of 12

Work out the perimeter of the shaded shape.



The diagram is not drawn to scale.

cm

Do not use a calculator

Watch video

On-screen keypad OFF


Check

You need to:

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

Write down

1) Perimeter of Shaded Shape? *No Calculator*

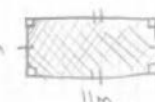


2mm

4 sides all with single dash  
↳ Square

$$P = 4 \times 2 = 8 \text{ mm} \checkmark$$

2) Perimeter of Shaded Shape?

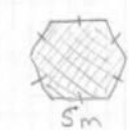


6m 11m

Rectangle

$$P = (2 \times 6) + (2 \times 11) = 12 + 22 = 34 \text{ m} \checkmark$$

3) Perimeter of Shaded Shape?



5m

6 equal sides  
↳ Hexagon

$$P = 6 \times 5 = 30 \text{ m} \checkmark$$

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.

# Student checklist for quality home learning

	Action	✓ or ✗
1	I always write the date, title, clip number and H/W for all my tasks.	
2	I always watch the video before attempting the questions.	
3	I always take full notes of all the examples modelled in the video.	
4	I copy every question that I attempt in my book.	
5	I show all my workings for every question in the quiz that I do.	
6	I try to model my work the way I was shown in the video by Mr Hegarty.	
7	I use a pencil and ruler for all diagrams.	
8	I mark my work correct/incorrect as I go.	
9	I write down corrections when HegartyMaths tells me the correct answer.	
10	I write down my score at the end of quiz .	



# What to do if you are stuck?

The screenshot shows the HegartyMaths interface. At the top, there's a video player for 'Area of sector (2)' with a red play button. Below the video, there's a quiz question '547 - Area of a sector (2)' with a 'Continue quiz' button. The 'Building blocks' section lists three items: '546 - Area of a sector (1)' with a red circular arrow icon, '557 - Triangles (1)' with a green checkmark icon, and '56 - Round decimal numbers' with a red circular arrow icon. A blue arrow points from the 'Continue quiz' button to the first yellow box, and another blue arrow points from the '546 - Area of a sector (1)' item to the second yellow box.

hegartymaths

**Area of sector (2)**

**Example**  
Find the green shaded area of this segment.  
(i) Give your answer as an expression in terms of  $\pi$ .

8cm

07:52

**547 - Area of a sector (2)**  
Your score New lesson HegartyMaths avg 61%

Continue quiz

**Building blocks**

Question preview  
Find the area of this sector in terms of  $\pi$ .

10cm

Geometry & measure > Circle measure

**546 - Area of a sector (1)**  
Last learned 01:51 Fri 29th Jun 18 Video watched 0.01x Completed in 1min  
Your score 10% View HegartyMaths avg 70% Feedback 0 (0 new)

Question preview  
Work out the area of the triangle.

8m 15m 17m

Geometry & measure > Area

**557 - Triangles (1)**  
Last learned 01:57 Fri 29th Jun 18 Video watched 0.01x Completed in 2mins  
Your score 100% View HegartyMaths avg 73% Feedback 0 (0 new)

Question preview  
Round 6.692 to 1DP.

Number > Decimals


**56 - Round decimal numbers**  
Last learned 01:55 Fri 29th Jun 18 Video watched 0.61x Completed in 1min  
Your score 92% View HegartyMaths avg 79% Feedback 0 (0 new)

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 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?

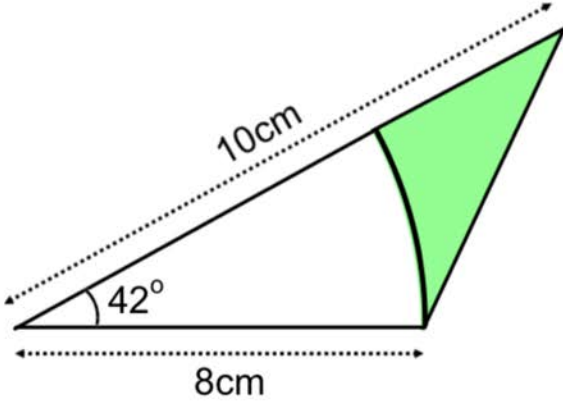
 hegarty**maths**

Geometry & measure > Circle measure > 547 - Area of a sector (2) > Quiz

1 2 3 4 5

5 of 5

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




The diagram is not drawn to scale.

cm<sup>2</sup>

Watch video

Check

# What to do if you are stuck?

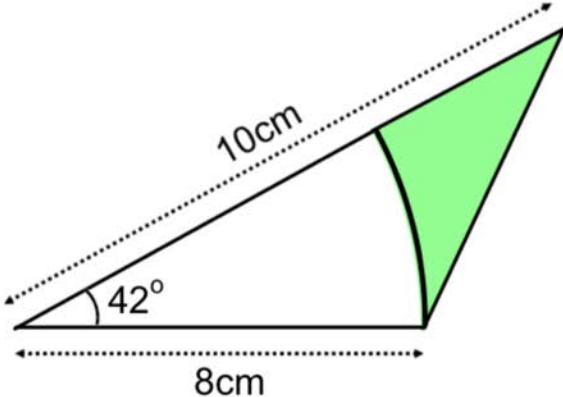
 hegarty**maths**

Geometry & measure > Circle measure > 547 - Area of a sector (2) > Quiz

1 — 2 — 3 — 4 — 5 ➔

5 of 5

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



The diagram is not drawn to scale.

cm<sup>2</sup>

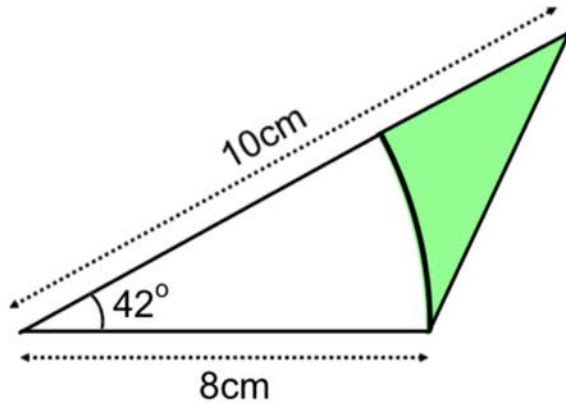
[Watch video](#)

Check

# What to do if you are stuck?

5 of 5

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



The diagram is not drawn to scale.

cm<sup>2</sup>

Watch video

## Area of a sector (2)

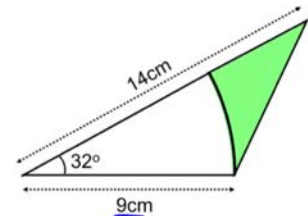
### Area of sector (2)

#### Example

Find the shaded area.

Give your answer to 1 decimal place.

Shaded = 



$$= \frac{1}{2}(9)(14)\sin(32) - \frac{32}{360} \times \pi(9)^2$$

$$= 10.755 \dots$$

$$= 10.8 \text{ cm}^2$$

# What to do if you are stuck?

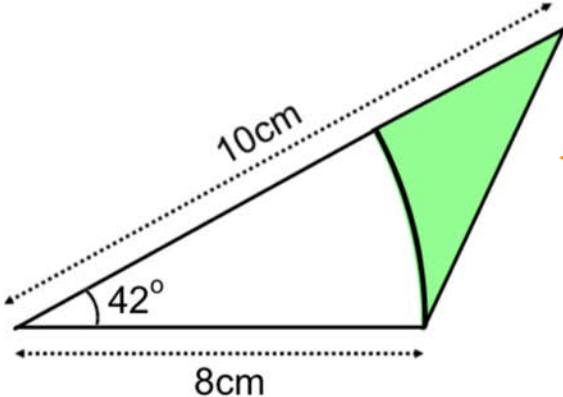
hegartymaths

Geometry & measure > Circle measure > 547 - Area of a sector (2) > Quiz

1 2 3 4 5

5 of 5

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



The diagram is not drawn to scale.

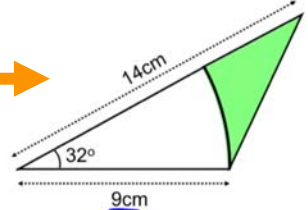
cm<sup>2</sup>


Watch video

Area of a sector (2)

### Area of sector (2)

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



Shaded = 

$$= \frac{1}{2}(9)(14)\sin(32) - \frac{32}{360} \times \pi(9)^2$$
$$= 10.755 \dots$$
$$= 10.8 \text{ cm}^2$$

There will always be an example in video that will cover an almost identical question to the one you are stuck on.  
You can also pull the video up in the quiz and scrub the video to the place that will help you on the one you're stuck on.

# 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 happens when students decide not to watch the video?

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- 1) Students get stuck and frustrated: Many students who just do the quizzes get really annoyed and frustrated with themselves as they make lots of mistakes and don't understand why or how to get better.
- 2) Students stay at the same level: Students who just practise questions only get questions correct on topics they already know and they get questions wrong for topics they don't know yet. They never improve. Watching the video means that for things you already know, you will secure that knowledge, and for things you don't know yet, you can learn and get better.

# What happens when students decide not to watch the video?

*“Mr Hegarty, I can’t do these homeworks as they are too hard and too I’m stupid!” (Hakim)*

Lesson	Score	📺	🕒	💬	📢	Assessment taken
Angles on a straight line (2)	0% 4 ✓	0.00x	10.05mins	0	0/0	21:02 Wed 19th Oct 16
Angles on a straight line (1)	72% 1	0.00x	5.85mins	0	0/0	15:40 Tue 18th Oct 16
Adding & subtracting positive & negative numbers	70% 1	0.00x	3.18mins	0	0/0	08:10 Fri 23rd Sep 16
Compare fractions	30% 4 ✓	0.00x	2.56mins	0	0/0	16:20 Tue 13th Sep 16

Very low scores

No video watched.

Spent only 2 mins quiz.

Hakim is upset and thinks he can't do maths.

He is wrong - **HE CAN DO MATHS!!!!**

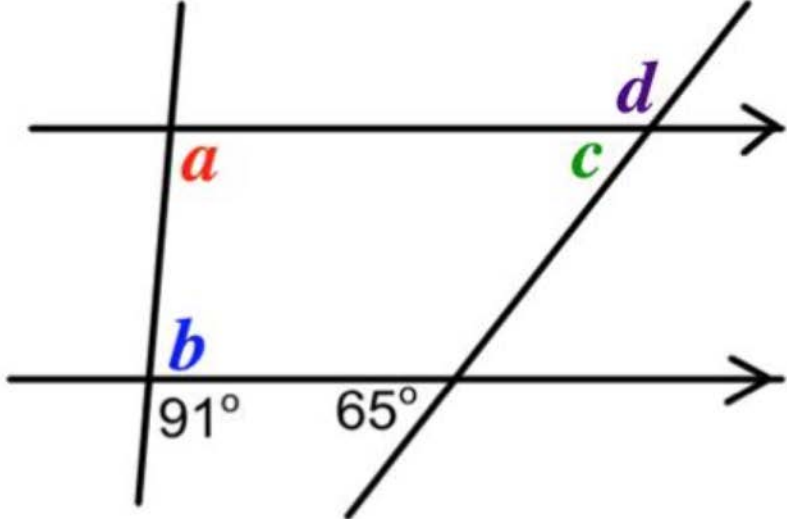
He is getting low scores as he is not watching the video or putting in enough effort.



# What happens when students decide not to watch the video?

7 of 7 79 seconds to answer this question Hide details

Find the values of the unknown angles marked with letters.



The diagram is not drawn accurately.

$a = 91^\circ$        $b = 89^\circ$        $c = 65^\circ$   
 $d = 115^\circ$

Correct! Well done.

Hakim 16 Wed 2nd Nov 16  
I have got the hang of this now. I have taken on board Mr Hegarty's comments to watch the video and improve

**Hakim smashes it!!!!!!!!!!**

Mr Hegarty reminded Hakim that he needs to spend longer on his homework, watch the video, take notes and write down all his workings. The next week Hakim completed a much harder homework, got it all correct and wrote back a comment to say thanks and he now knows how to improve and succeed.

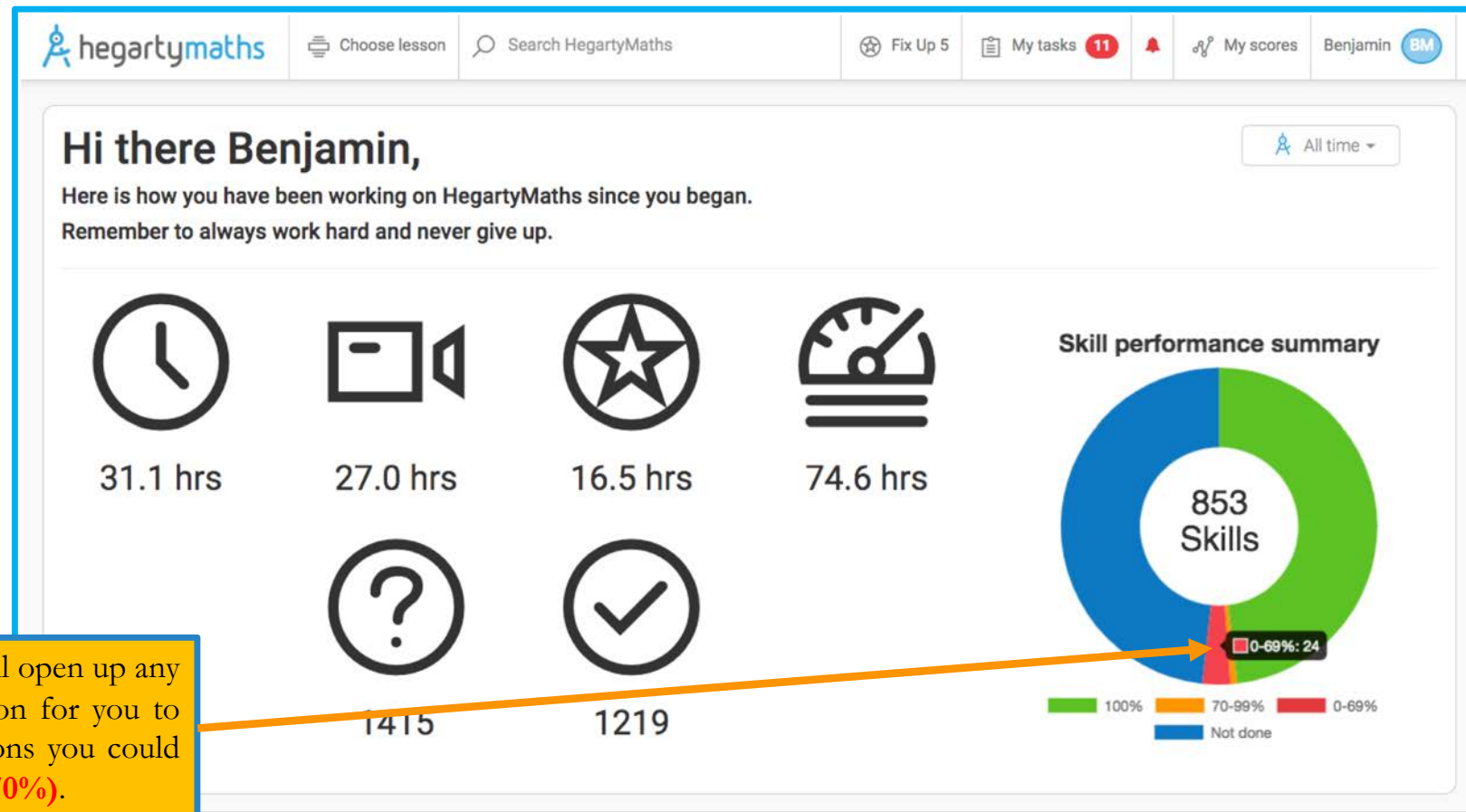
# What if I've done all my work – what else could I do?

## 5 things you should do when you want to do extra work

	Action	✓ or ✗
1	I go back to my donut and pick lessons that are <b>red</b> (<70%) to redo them to make them <b>amber</b> (>70%) or <b>green</b> (100%).	
2	I go back to my donut and pick lessons that are <b>amber</b> (>70%) to redo them to make them <b>green</b> (100%).	
3	When working on lessons that are <b>red</b> or <b>amber</b> and I cannot make them <b>100%</b> , I rewatch the video and look at the building blocks which may help me.	
4	I complete a <b>Fix-Up-5</b> where HegartyMaths gives me 5 practice questions on parts of maths that I might be weak on.	
5	If my teacher has given me a revision list of clips on HegartyMaths, then pick a topic on that list and complete a homework the normal way myself.	

# What if I've done all your work – what else could I do?


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



Click the red section and it will open up any lessons you are **under 70%** on for you to redo. Here, you have 24 lessons you could improve that are **red (under 70%)**.


# What if I've done all your work – what else could I do?

2) Fix up 5: HegartyMaths remembers every mistake you have ever made and generates a quiz with 5 questions from different parts of maths that you are weak on so you can re-do them with the video and **Fix Up**!

 Choose lesson Search HegartyMaths **Fix Up 5** My tasks 11 My scores Benjamin BM

## Fix Up 5

Fix Up 5 no.	Score	⌚	Date completed
244	2/5	1min	19:11 Fri 7th Sep 18
243	1/5	< 1 min	17:51 Fri 7th Sep 18
242	1/5	1min	15:49 Fri 7th Sep 18
241	3/5	4mins	11:46 Fri 7th Sep 18
240	1/5	1min	15:57 Thu 6th Sep 18
239	2/5	5mins	17:05 Wed 5th Sep 18
238	1/5	2mins	17:51 Tue 4th Sep 18
237	0/5	< 1 min	16:48 Tue 4th Sep 18
236	2/5	3mins	16:48 Tue 4th Sep 18
235	0/5	1min	14:23 Mon 3rd Sep 18



**13**  
Questions fixed up  
this year  
in 0.3hrs

Start

My current streak

1

My best streak


3

[Click here to learn about our Fix Up 5.](#)

Page 1 of 25 < >

# What if I've done all your work – what else could I do?

**3) Learn a new section:** Your teacher may have given you a revision list of clips so you can now use that to find a clip on HegartyMaths that is appropriate for you. Watch the video and do the quiz for a clip you haven't done before.



Foundation Skills List

## Number

Topics	Clip Number			
Ordering positive integers	13, 14			
Ordering negative integers	37			
Ordering decimals	45, 46			
Ordering fractions	60			
Addition and subtraction of positive integers	18, 19, 20			
Multiplication and division of positive integers	21, 22, 23, 144, 145			
Addition and subtraction of negative integers	38, 39, 40, 41			
Multiplication and division of negative numbers	42, 43			
Addition and subtraction of decimals	47			
Multiplication and division of decimals	48, 49, 50, 51, 135, 136			
Addition and subtraction of fractions	65, 66			
Multiplication and division of fractions	67, 68, 69, 70, 71, 72			
Place value: multiplying and dividing by 10	15, 16			
Order of operations	24, 44, 120, 150			
Prime numbers, prime factorisation	28, 29, 30			
Factors, multiples, HCF and LCM	27, 31, 32, 33, 34, 35, 36			
Powers and roots	99, 100, 101			
Using standard form	121, 122, 123, 124			
Calculating with standard form	125, 126, 127, 128			
Converting decimals to/from fractions	52, 53, 73, 74, 149			
Converting percentages to/from fractions	75, 76, 82, 149			
Converting percentages to/from decimals	55, 83			
Simplifying fractions	59, 61			
Mixed numbers and improper fractions	63, 64			
Fractions of amounts	62, 77			
Increasing/decreasing by fractions	78, 79			
Fraction problems	80			
Percentages of amounts	84, 85, 86, 87			
Percentage increase/decrease	88, 89, 90			
Percentage change	97			
Reverse percentages	96			
Simple interest	93			
Percentage problems	98			
Rounding	17, 56, 134			
Rounding to significant figures	130			
Estimating answers	129, 131, 132, 133			
Working with money	747, 748, 749, 750, 751			
Money problems	752, 753, 754			
Financial statements	757			
Income and rates of pay	755, 756			
Profit and loss	759, 760, 761, 762			
Best buys	763, 764, 765, 766, 767			