



# Maths - helping you to help us



We aim to make our school the best  
A place of discovery and success  
Caring, sharing, taking turns  
We learn to love, we love to learn

# Maths- helping you to help us



- Purpose of the evening
- Aims of mathematics teaching
- Mathematics in EYFS and KS1
- Key mathematics skills at JHSW
- Teaching calculation
- Visiting Classrooms
- Feedback

# Maths - helping you to help us



What are we aiming for?

Please write clearly in block capitals.

Centre number

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Candidate number

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Surname

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Forename(s)

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Candidate signature

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## GCSE MATHEMATICS

# H

Higher Tier Unit 2 Number and Algebra

Friday 6 November 2015

Morning

Time allowed: 1 hour 15 minutes

### Materials

For this paper you must have:

- mathematical instruments.

You must **not** use a calculator.



### Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book.

### Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 66.
- The quality of your written communication is specifically assessed in Questions 3 and 4. These questions are indicated with an asterisk (\*).
- You may ask for more answer paper and graph paper. These must be tagged securely to this answer book.

### Advice

- In all calculations, show clearly how you work out your answer.



N 0 V 1 5 4 3 6 0 2 H 0 1

**3 (a)** It is given that the curves with equations  $y = 6 \ln x$  and  $y = 8x - x^2 - 3$  intersect at a single point where  $x = \alpha$ .

(i) Show that  $\alpha$  lies between 5 and 6.

[2 marks]

(ii) Show that the equation  $x = 4 + \sqrt{13 - 6 \ln x}$  can be rearranged into the form

$$6 \ln x + x^2 - 8x + 3 = 0$$

[3 marks]

(iii) Use the iterative formula

$$x_{n+1} = 4 + \sqrt{13 - 6 \ln x_n}$$

with  $x_1 = 5$  to find the values of  $x_2$  and  $x_3$ , giving your answers to three decimal places.

[2 marks]

**(b)** A curve has equation  $y = f(x)$  where  $f(x) = 6 \ln x + x^2 - 8x + 3$ .

(i) Find the exact values of the coordinates of the stationary points of the curve.

[5 marks]

(ii) Hence, or otherwise, find the exact values of the coordinates of the stationary points of the curve with equation

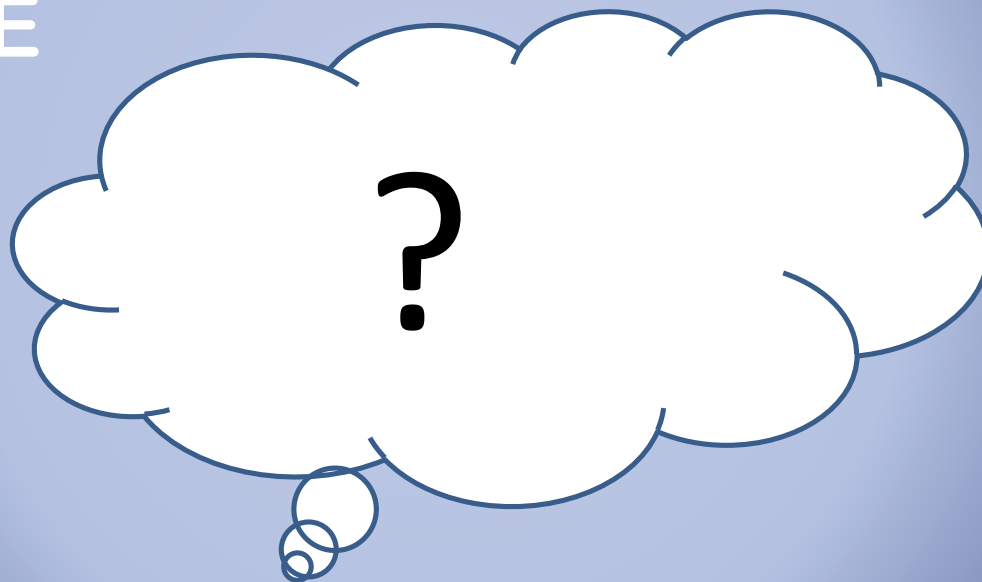
$$y = 2f(x - 4)$$

[2 marks]

# Maths - helping you to help us



PURPOSE



# Maths - helping you to help us



- How do I get my child to love maths?
- What am I expected to do to help?
- What are the mathematics skills that infant children need to develop?
- What methods are used for calculation?

# Maths - have we helped?



What am I expected to do to help?  
What are the mathematics skills that children need to develop?  
What methods are used for calculation?  
How do I get my child to love maths?

FEEDBACK  
HANDOUTS/WEBSITE

# Maths - have we helped you?

[Home](#) [News](#) [Calendar](#) [About us](#) [Key information](#) [Curriculum](#) [FJH](#) [OOSC](#) [Classes](#) [Parents](#) [Gallery](#) [Contact](#)

### Head Teacher's Welcome

Welcome to the website of the John Hampden School Wendover. We hope you enjoy browsing the site to learn more about our school, as well as giving you a flavour of what the school can offer your child. The John Hampden School is an infant school teaching children from 4 to 7 years old. Staff and governors work hard to ensure that children are happy and challenged and leave the school with the highest levels of attainment they are capable of. The school is very proud of its achievements and its excellent reputation.

"Staff at The John Hampden School have created a delightful learning environment in which all pupils can thrive and flourish. Pupils make good progress and their achievement overall is outstanding"

"Provision for pupils with special needs and/or disabilities is"

[Read more...](#)

### Latest news

23rd September, 2016  
[Dahlicious Dress Up Day](#)

September 2016

M	T	W	T	F	S	S
29	30	31	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18

# Mathematics - AIMS



By the end of their time at JHSW children should:

- Develop confidence and mental fluency with whole numbers, counting and place value
- Work with numerals, words and the four operations (+, -,  $\times$ ,  $\div$ ) including with practical resources
- Recognise, draw, compare and sort different shapes
- Use a range of measures to describe and compare length, mass, capacity/volume, time and money
- Know number bonds to 20 and be precise in using and understanding place value
- Read and spell mathematical vocabulary

# KEY SKILLS

**1-1 correspondence**

# KEY SKILLS

counting

# KEY SKILLS

**Number recognition**

# KEY SKILLS

0

1

2

3

4

5

6

7

8

9

# KEY SKILLS

**Vocabulary**

# Ordering Numbers 1 to 10

3

2

7

4

8

5

10

9

1

6

# The Very Hungry Caterpillar Addition

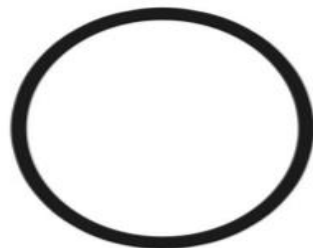
Write the answers in the circles. Then write the number sentence on the line below.



+



=



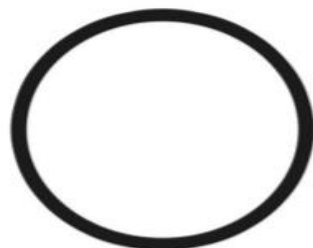
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+



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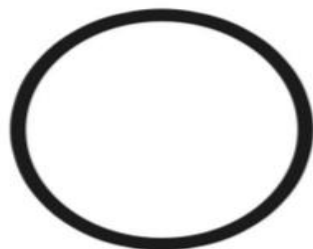
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