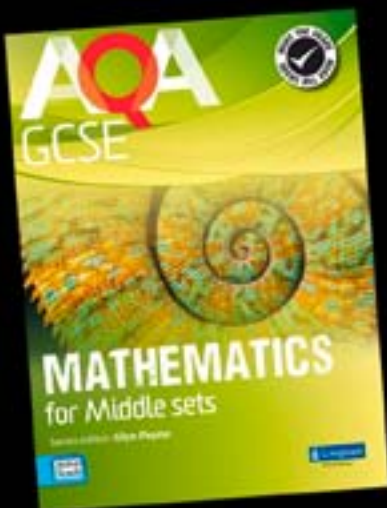


Sherlock Holmes & the Mystery of the Devil's Eye - A Mathematical Adventure in Six Thrilling Episodes

By Harry Smith



**TEACHING AQA
GCSE MATHS**

 Longman

Part of Pearson

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As the Episodes progress, Holmes and Watson get dragged deeper into London's underworld. Moving between some of the Capital's darkest corners and brightest attractions, the pair soon realise they are caught up in something bigger than a simple jewel heist, in pursuit of someone more dangerous than a mere thief...

Dear Maths Teacher,

WELCOME TO OUR SHERLOCK HOLMES MATHEMATICAL ADVENTURE!

Set in modern day London, Sherlock Holmes has been called in by Scotland Yard to investigate the theft of the world's largest ruby, the Devil's Eye. Stolen from Harrods, the police have nothing to go on except a few mathematical clues.

Your students' challenge is to solve the clues to help Holmes and Watson work out where they must go next.

This booklet is free, fun and (best of all) closely linked to the AQA GCSE curriculum. Each Episode is presented as an extract from Holmes' case notes. All the clues (questions) carry a GCSE grade and an A02/A03 label – perfect for testing the new 2010 specification. And we've included worksheets and answers in this booklet too.

Feel free to print and photocopy these pages.
You'll find a PDF version available to download from our Teaching AQA GCSE Maths blog:

<http://aqagcsemaths.wordpress.com/sherlock-holmes-case/>

The blog is where we originally published the adventure, alongside a whole host of other free resources. We're the same team that put together the new **Longman AQA GCSE course** (p.32). The **Middle sets book** from this course provides support for all the questions and puzzles in this booklet.

Have fun, and stay safe at night -

The Maths Team at Longman

Each Episode is presented as an extract from Holmes' case notes.

SHERLOCK HOLMES & THE MYSTERY OF THE DEVIL'S EYE

SH *consulting detective*

Longman
by appointment to
Longman Textbooks

Friday 17 September 2010

8 am: LOCATION 221B Baker Street, London W1

Received an email from Scotland Yard this morning... the game is afoot

Sherlock Holmes
From: g.lestrade@scotlandyard.gov
Sent: Friday, September 17, 2010 7:44 AM
To: SherlockH_221B@yahoo.co.uk
Subject: Help! Jewel Heist at Harrods

Sherlock

Devil's Eye arrives tonight on private jet from Cairo.
Maximum security in place but I'm still getting twitchy.
I think we might need your help on this one.

Lestrade

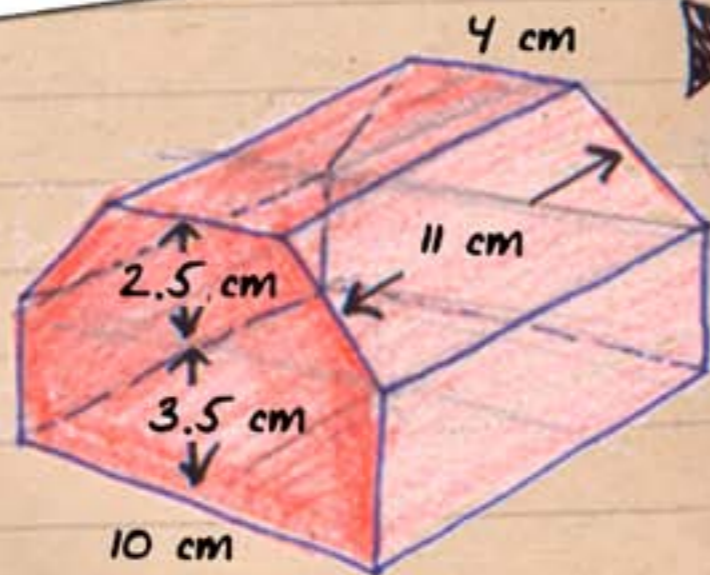
ELEMENTARY MY DEAR WATSON

1 How many planes of symmetry does the Devil's Eye have?

GRADE 0 / / / / A01
PAGES 416-422

2 Draw a plan, front and side elevation of the Devil's Eye.

GRADE 0 / / / / A01
PAGES 416-422



Hmmm... interesting. The Devil's Eye ruby is in the shape of a PRISM and its cross-section is a TRAPEZIUM. It's almost as if it was designed to refract light!

PROLOGUE: RUBY SLIPPERS...

PICK UP THE TRAIL AT WWW.AQAGCSEMATHS.WORDPRESS.COM

Watson found this in Monday's paper

The Daily

Monday, 13 September 2010

World's Largest Ruby On

The world's largest ruby, the Devil's Eye, will go on display at London's Harrods department store this week. The gem, valued at more than £20 million, is being sold by the estate of Egyptian billionaire Sheikh Akil Bayoumi.

Looted from the tomb of Pharaoh Amhotep IV in the 18th century, the ruby is said to carry an ancient

curse. All of its previous owners have either died or gone mad, and Harrods' Egyptology expert Dr Mary O'Hara has refused to handle the stone.

"Sheikh Bayoumi died in mysterious circumstances earlier this year," said Dr O'Hara, 32. "We shouldn't play with things we don't understand. The stone is possessed by the devil."

I'd better head to Harrods to check out the security arrangements. Feeling peckish though, so I think I'll stop off at the Serpentine for a bacon sarnie first.



Harrods has just been sold to the Qatari royal family... is it a clue?

WHERE NEXT?

Look at Sherlock's Handy Map App.

Each small square represents 100 m. So 10 units on the map represents 1 km in real life.

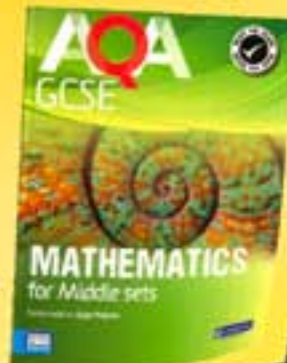
Plan Holmes' route from 221B Baker St to Harrods via the Serpentine. Describe your route using coordinates and work out the total distance Holmes has to travel.

GRADE 0 / / / / A02
PAGES 530-532

TO BE CONTINUED...

Episode 1 is coming to the Longman AQA GCSE Maths blog on Wednesday 22 September!

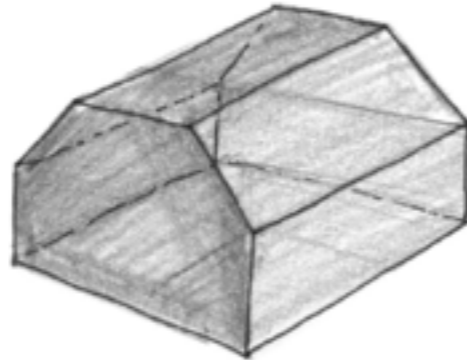
There will be key clues in Longman's AQA GCSE Middle Sets book. Visit the blog to order your free copy.



WATSON'S WORKSHEET: PROLOGUE

ELEMENTARY MY DEAR WATSON

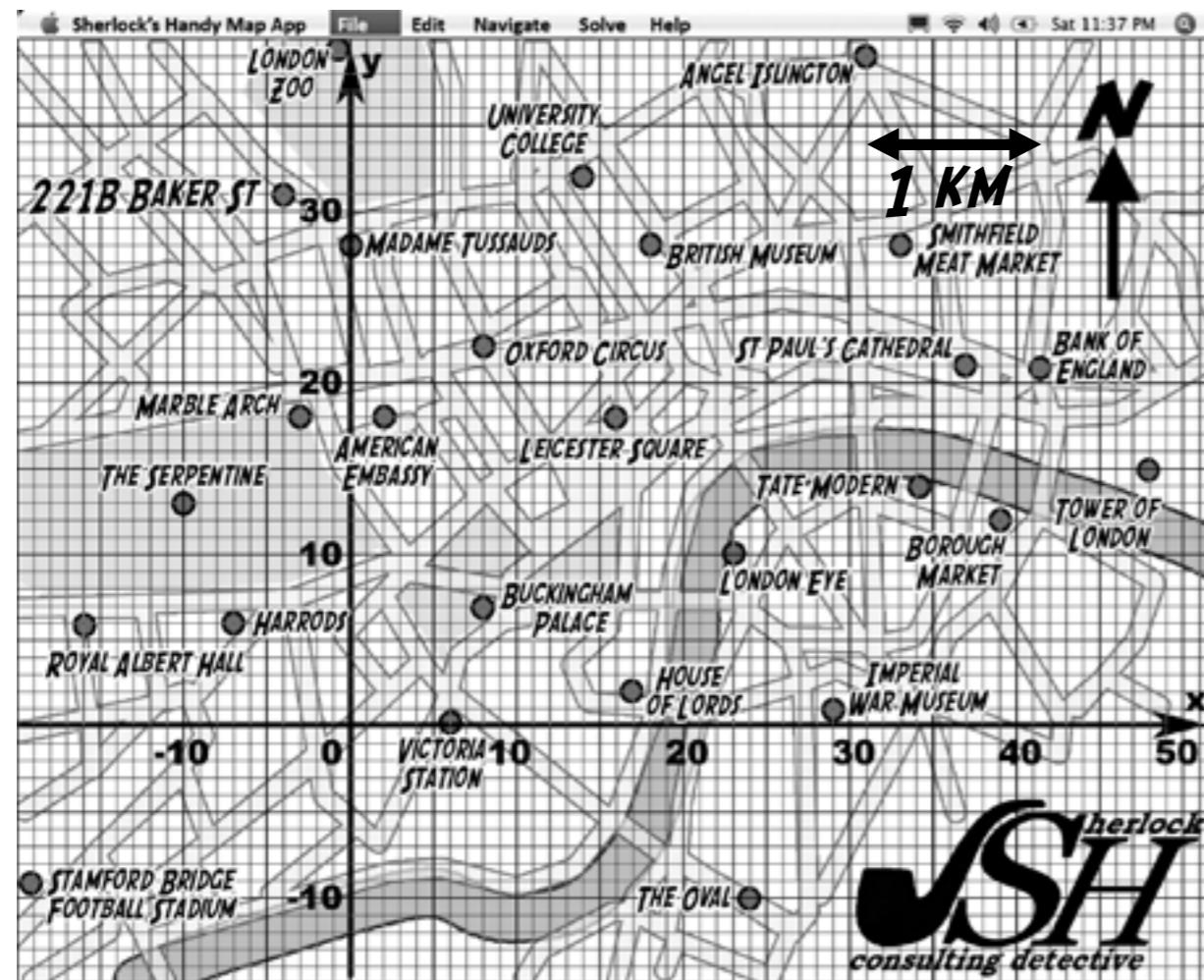
- How many planes of symmetry does the Devil's Eye ruby have?
- Draw a plan, front and side elevation of the Devil's Eye ruby. Use a sheet of plain A4 paper.



WHERE NEXT?

Plan Holmes' route from 221B Baker St to Harrods via the Serpentine. Holmes can travel along roads or across Hyde Park. Describe your route using coordinates and work out the total distance Holmes has to travel.

You can work out the length of your route by measuring and using the map scale, or by using Pythagoras' Theorem.



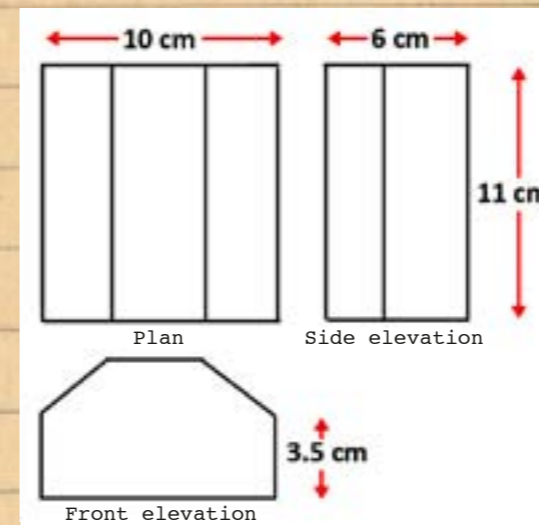
PICK UP THE TRAIL AT WWW.AQAGCSEMATHS.WORDPRESS.COM

PROLOGUE MAP AND SOLUTION



Elementary My Dear Watson

- 2.
-



Where Next?

The next location is Harrods.

A possible route would be $(-4, 31)$, $(0, 21)$, $(-10, 13)$, $(-7, 6)$.

The total distance of this route is 3.1 km (1 decimal place)

SHERLOCK HOLMES & THE MYSTERY OF THE DEVIL'S EYE



Longman
by appointment to
Longman Textbooks

Wednesday 22 September 2010

11 am: LOCATION Harrods Department Store, London SW1



11 AM: Outside Harrods. Oops! Looks like I might be a bit late for the party...

««««Official transcript»»»»
22 September 2010/11:12 am

Lestrade/
Thank God you're here Holmes!
The display case was smashed and
the Devil's Eye ruby was gone.

Holmes/
... and you say the alarm
didn't go off, Lestrade?

Lestrade/
It's a complete mystery. The
room has a laser security
system. It's impenetrable.

Holmes/
The only problem with a laser,
Lestrade, is that it can only
travel in straight lines.

Lestrade/
Stop talking in riddles Holmes.
We don't even know which door
the thief used.

Holmes/
Oh but we do, my old friend,
we do...



Managed to get a snapshot of
the security system on my phone...

THE SCIENCE OF DEDUCTION



How does Holmes know
which door the thief
used?

Use the clues to deduce
the answer. Write down how
you worked out the correct
door.

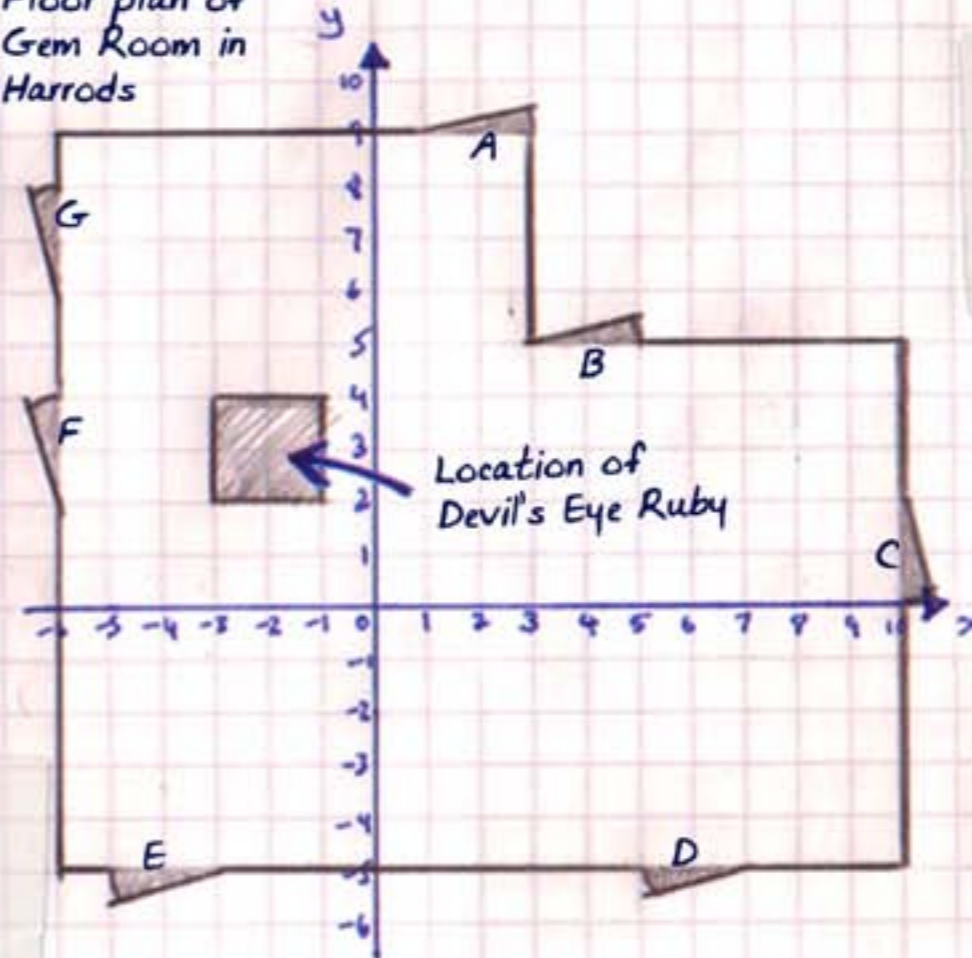
GRADE C /// A03
PAGES 300-309

Hmm... it all seems a bit
too easy. Almost as if
we were MEANT to solve
the riddle?

EPISODE 1: SMASH 'N' GRAB

PICK UP THE TRAIL AT WWW.AQAGCSEMATHS.WORDPRESS.COM

Floor plan of
Gem Room in
Harrods



Success! We found the correct door. And there is

Is that you Holmes? Funny... most
people have two eyes, and you
don't seem to have any do you?
Perhaps if you looked for the
second one it might help you
find the first.

By the way, I've given the ruby
to an old friend to look after.
And you know, owners of this
stone don't seem to last long.
Best hurry before something
happens to her.

P.S. Did you know that the density
of ruby is 4 grams per cubic cm. If
you coordinate your efforts you
might mass-terminate the solution

a NOTE wedged in
it. I think someone
is playing a little
game with me.



WHERE NEXT?

Can you work out the
location of the next crime
before a MURDER is committed?

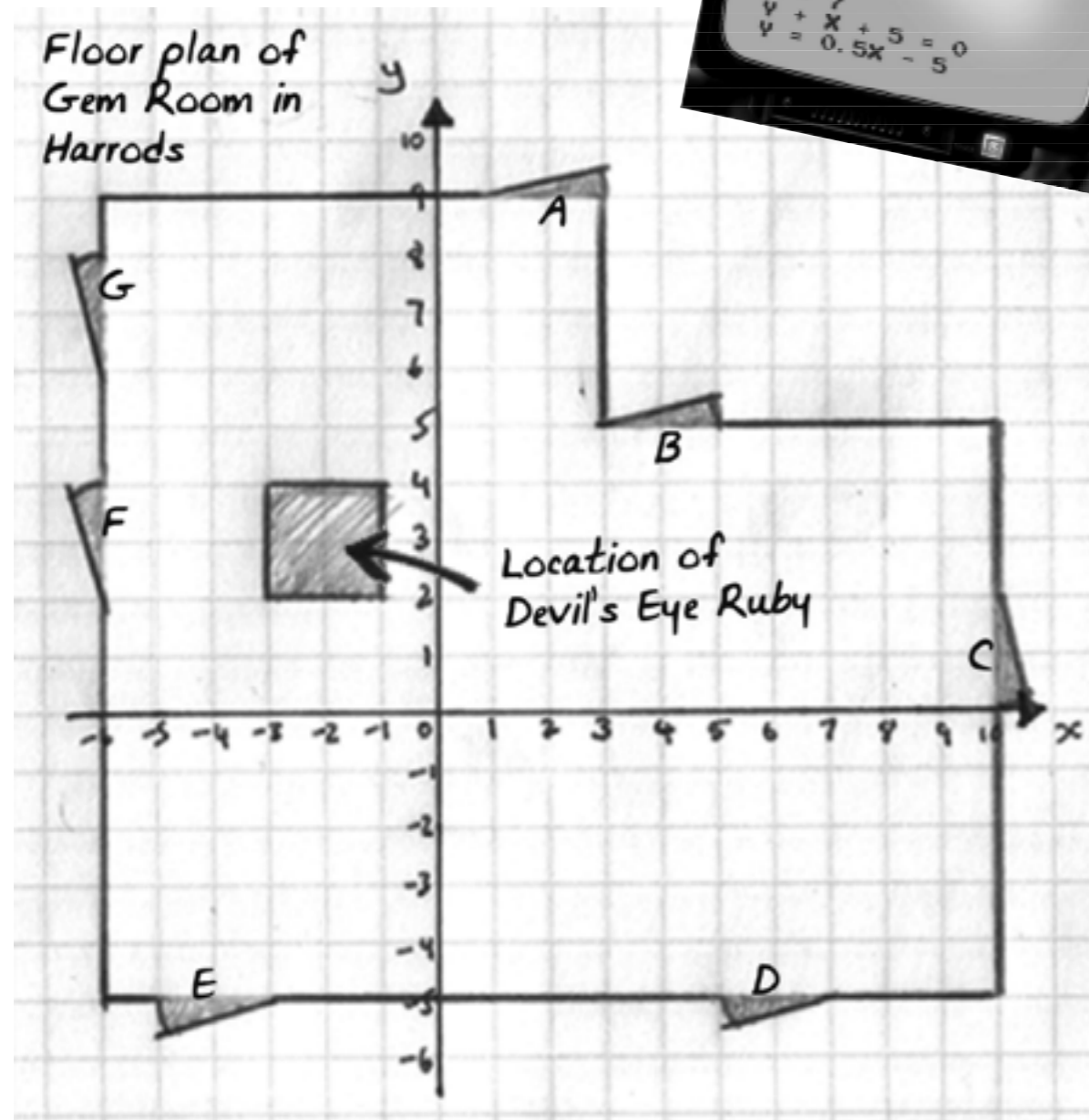
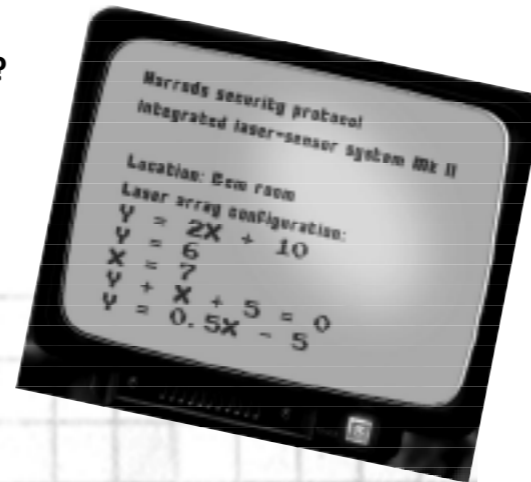
Use the clues in the note, the
map and the prologue. Remember
to explain how you used the
clues to deduce the solution!

GRADE C /// A03
PAGES 465-467

WATSON'S WORKSHEET: EPISODE 1

THE SCIENCE OF DEDUCTION

How does Holmes know which door the thief used?
Use these clues to deduce the answer.



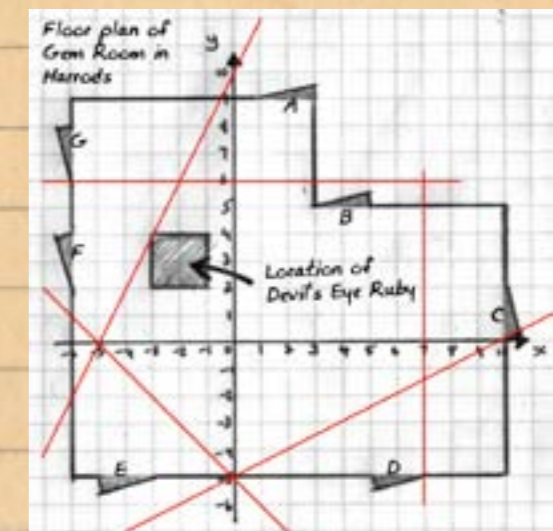
PICK UP THE TRAIL AT WWW.AQAGCSEMATHS.WORDPRESS.COM

EPISODE 1 MAP AND SOLUTION



The Science of Deduction

The thief used door B.
All the other doors are protected by lasers.



Where Next?

The next location is the London Eye.

The dimensions of the Devil's Eye ruby are given in the prologue. The volume of the ruby is 577.5 cm^3 . The density of ruby is given as 4 g/cm^3 . So the mass of the ruby is 2310 g .

$(23, 10)$ are the coordinates of the London Eye.
The note refers to looking for a second 'eye'.

SHERLOCK HOLMES & THE MYSTERY OF THE DEVIL'S EYE



Longman
by appointment to
Longman Textbooks

Wednesday 6 October 2010

12:55 pm: LOCATION London Eye, South Bank

<<<<Official transcript>>>>
6 October 2010/12:55 pm

Lestrade/
Good work figuring it out Holmes, but we're too late. A dead body has been spotted on the Eye, and the killer has made a clean getaway.

Holmes/
He must have got out of the capsule while it was on the ground. He can't have got far.

Lestrade/
But how far? I've got no idea.

Holmes/
That's why I'm here, Lestrade.



The body is in this capsule. It's nearly back at the ground already!

Wheel turns this way

32 equally spaced capsules

Dead body spotted in this capsule

Wheel turns through an angle of 1 degree every 5 seconds...

Entrance and exit



THE SCIENCE OF DEDUCTION

1 How long ago did the killer leave the crime scene? Give your answer in minutes and seconds.

GRADE D /// A03
PAGES 22, 340 & 358

2 If the killer travels at 7 km/h on foot, how far could he have got?

GRADE D /// A03
PAGES 463-465

EPISODE 2: WHEEL OF FORTUNE

PICK UP THE TRAIL AT WWW.AQAGCSEMATHS.WORDPRESS.COM



The "dead body" is missing a hand.

The dead body turned out to be nothing more than a shop mannequin. Whoever's behind this has got a twisted sense of humour.

And there's ANOTHER note... you know I'm beginning to get the feeling that I'm being taken FOR A RIDE!?

Watson found the missing hand in the corner of the capsule. I got a snapshot of it with my phone and imported it into my new Angle App... could be helpful?



Oh sorry Holmes. I didn't mean for you to look like a DUMMY. I'm afraid this is just WINDOW DRESSING. Maybe the next time my victim might be a bit more warm-blooded. Wouldn't it be heavenly if Dolly here could be a saint and point you in the right direction. It might have some bearing on where I'm headed next.

WHERE NEXT?

Help Holmes find the next location before the 'killer' chooses a more animated victim!

Remember to use the map and say how you deduced your solution.

GRADE D /// A03 PAGES 349-356

TO BE CONTINUED...

WATSON'S WORKSHEET: EPISODE 2

THE SCIENCE OF DEDUCTION

1. How long ago did the killer leave the crime scene?

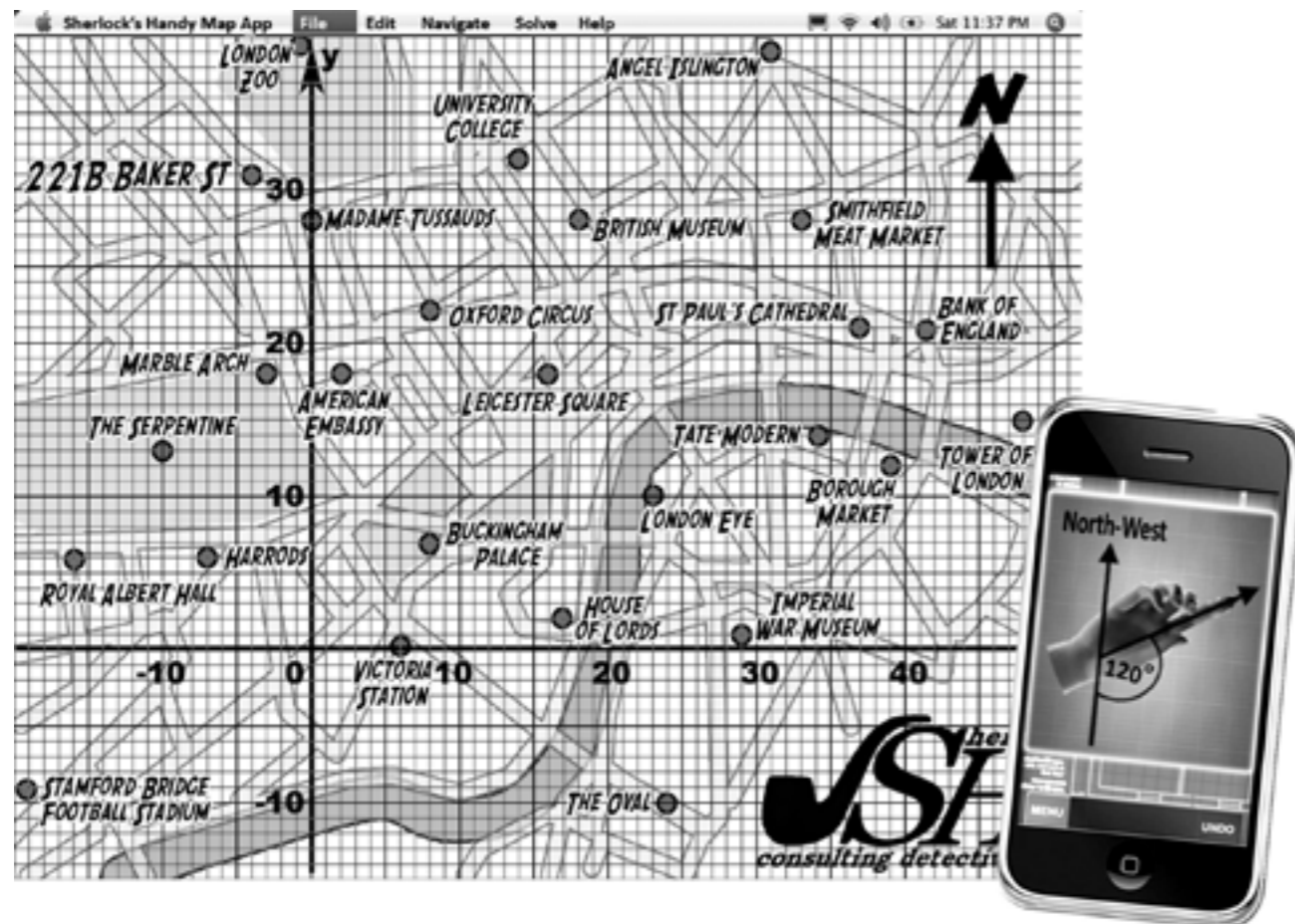
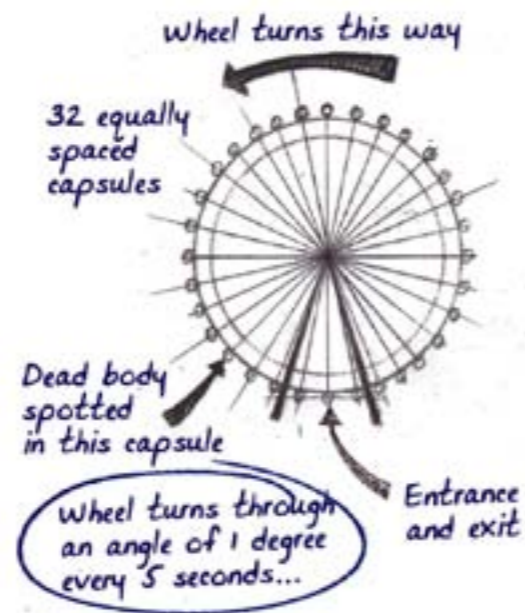
Give your answer in minutes and seconds.

2. If the killer travels at 7 km/h on foot, how far could he have got?

WHERE NEXT?

Help Holmes find the next location before the 'killer' chooses a more animated victim.

Remember to use the map and say how you deduced the solution.



PICK UP THE TRAIL AT WWW.AQAGCSEMATHS.WORDPRESS.COM

EPISODE 2 MAP AND SOLUTION



The Science of Deduction

1. The capsule containing the body is $\frac{28}{32}$ of the way around the London Eye. So it has travelled through 315° , taking 1575 seconds or 26 minutes and 15 seconds.
2. The killer could have travelled 3.1 km (1 d.p.)

Where Next?

The next location is Angel Islington.

Holmes' Angle App shows that the hand is pointing on a bearing of 015° . (60° clockwise from North West.) The only location which lies on a bearing of 015° from the London Eye is Angel Islington. This location is also approximately 3.1 km from the London Eye, and the note uses the words 'heavenly' and 'saint'.

SHERLOCK HOLMES & THE MYSTERY OF THE DEVIL'S EYE



Longman
by appointment to
Longman Textbooks

Wednesday 20 October 2010

7:23 am: LOCATION Angel Islington, London, N1



Watson spotted something!



Hang on... what's that in the shadows underneath the plinth...



<<<<Official transcript>>>>
20 October 2010/07:26 am

Holmes/
Well it looks like the trail has gone cold Watson. We're either too early or too late!

Watson/
Er... I think I've spotted something Holmes... and you're not going to like it.

Holmes/
This isn't funny any more. I don't like being toyed with!

Watson/
Calm down Sherlock... I think it's a very good likeness!



A secret hatch! And there's a keypad, and a computer screen?

Uh-oh! I don't know what an "EXPLOSIVE SHUT-OFF" is, but I don't want to find out!

EPISODE 3: THINGS THAT GO BUMP IN THE NIGHT

PICK UP THE TRAIL AT WWW.AQAGCSEMATHS.WORDPRESS.COM

THE SCIENCE OF DEDUCTION

Work out the correct code to open the secret hatch.

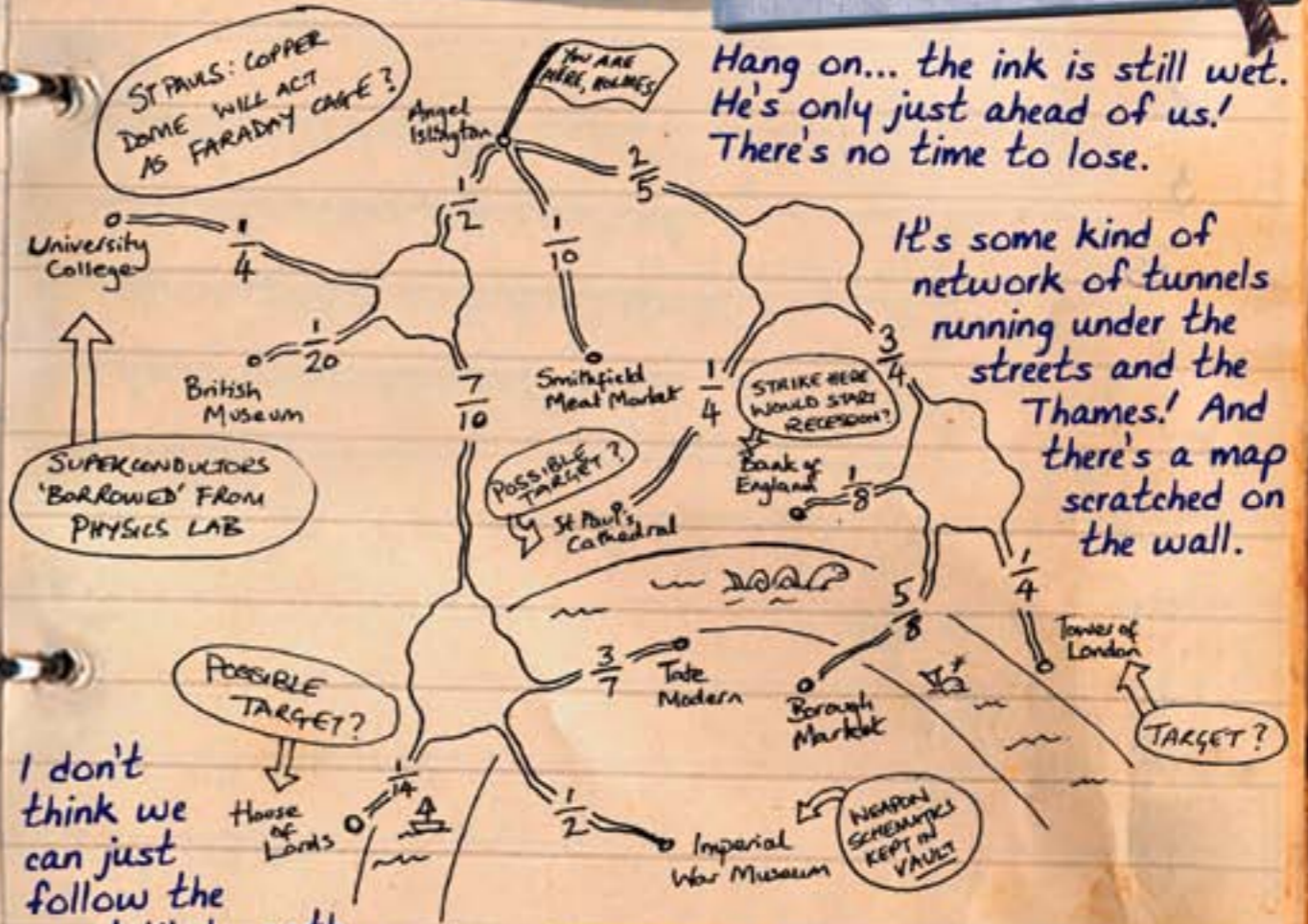
Explain how you deduced your answer.

GRADE 8 / / / / A03
PAGES 150-52, 237-40

We're in! And there's another note taped inside the hatch!

mind your head when you come through Holmes. If you want to follow this little piggy, your best bet will be to take a chance on the most likely outcome. Probably. Hope you've been eating your carr...

Hang on... the ink is still wet. He's only just ahead of us! There's no time to lose.



It's some kind of network of tunnels running under the streets and the Thames! And there's a map scratched on the wall.

I don't think we can just follow the most likely path at each junction... there's more to it than that.

And I'm slightly worried that the notes mention a WEAPON of some kind. Better get a move on!

WHERE NEXT?

Work out the most likely destination to follow the thief through the underground maze.

GRADE 8 / / / / A03 PAGES 86-92

TO BE CONTINUED...

WATSON'S WORKSHEET: EPISODE 3

THE SCIENCE OF DEDUCTION

Work out the correct code to open the secret hatch.

Explain how you worked out your answer.

Hint: Work out the value of one diamond first.

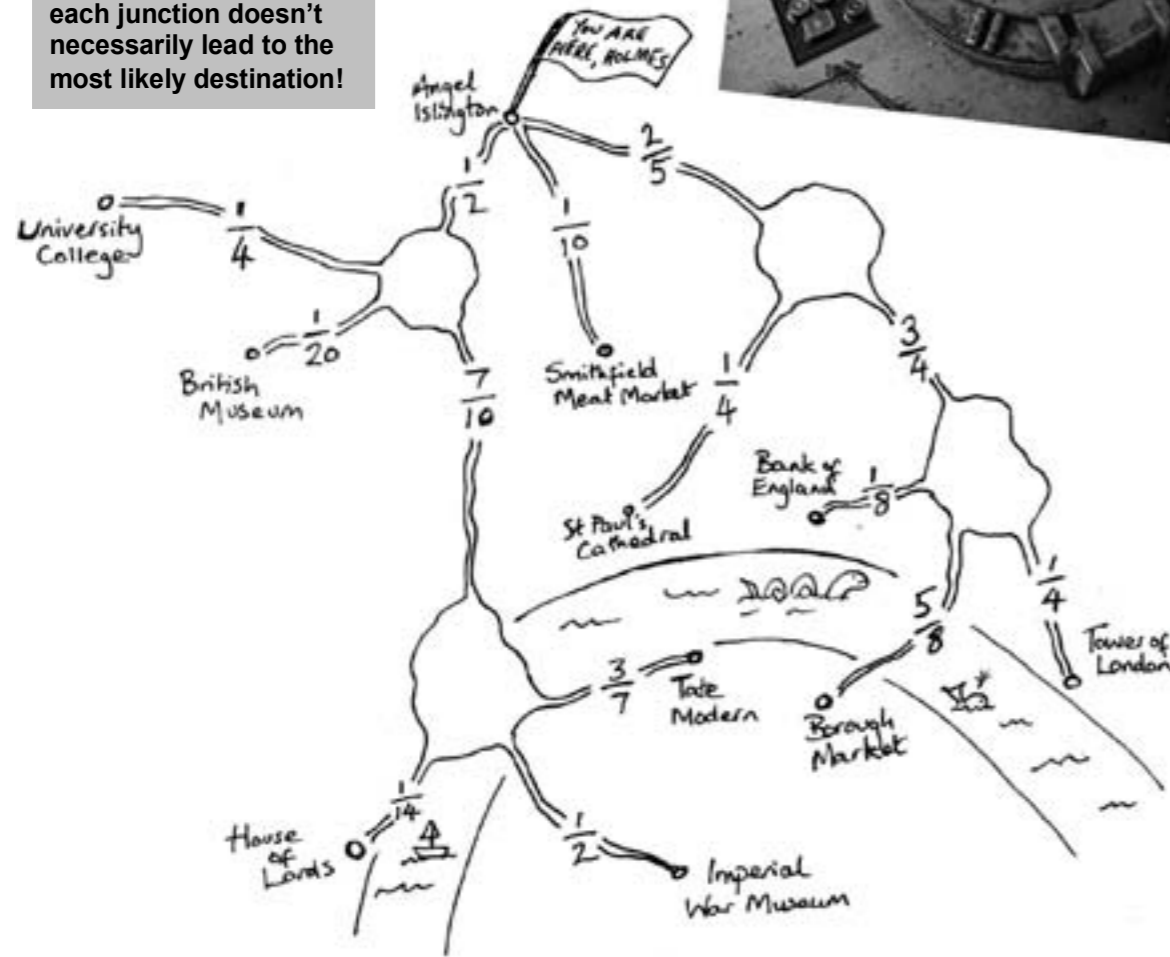


WHERE NEXT?

Follow the thief through the underground maze by working out the most likely destination.

Remember to show all of your working.

Be careful! Following the most likely route at each junction doesn't necessarily lead to the most likely destination!



PICK UP THE TRAIL AT WWW.AQAGCSEMATHS.WORDPRESS.COM

EPISODE 3 MAP AND SOLUTION



The Science of Deduction

The code is 2131

Using d to represent one diamond and c to represent one circle

$$4d = 1684 \text{ so } d = 421$$

$$3d + 2c = 2403 \text{ so } c = 570$$

The code on the hatch is 1 diamond and 3 circles.

$$d + 3c = 2131$$

Where Next?

The next location is Borough Market.

Multiplying probabilities along the branches, the most likely destination is Borough Market. The probability for Borough Market is $\frac{2}{5} \times \frac{3}{4} \times \frac{5}{8} = \frac{3}{16}$. Note that following the most likely outcome at each junction would lead to the Imperial War Museum, with a lower overall probability of $\frac{1}{2} \times \frac{7}{10} \times \frac{1}{2} = \frac{7}{40}$. The note suggests that 'this little piggy' went to market.

SHERLOCK HOLMES & THE MYSTERY OF THE DEVIL'S EYE



Longman
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Longman Textbooks

Friday 5 November 2010

11:31 pm: LOCATION Borough Market, London, SE1

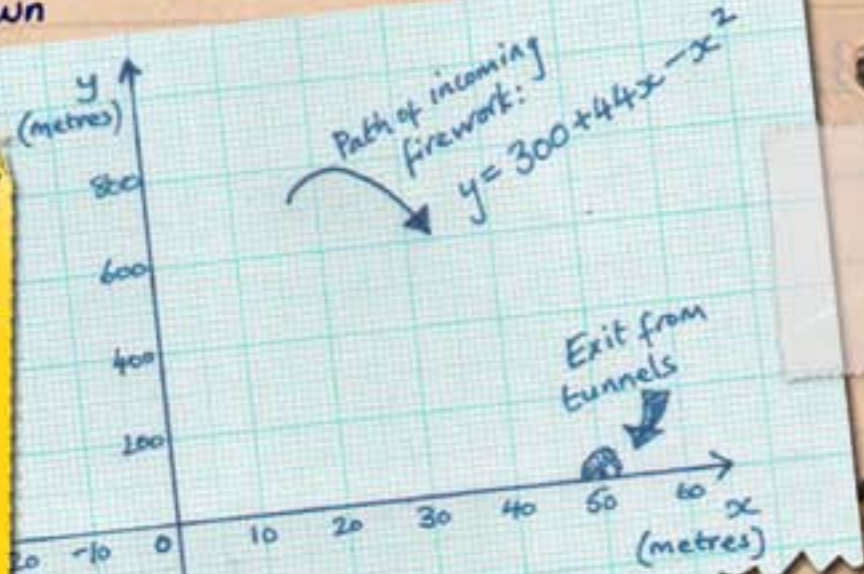


Fireworks! And that one looks like it's headed straight for me!



My old nemesis MORIARTY! I knew he'd be behind this...

INCOMING!!! I'm out of the tunnels, but there's a firework headed RIGHT FOR ME. I've managed to plot its trajectory. I need to work out where it was fired from to try and track down Moriarty!



The firework must have been launched from ground level by an accomplice...

THE SCIENCE OF DEDUCTION

Track down Moriarty by working out how far away from the tunnel exit the firework was launched from.

Explain how you deduced your answer.

GRADE B / / / / A03
PAGES 327-30, 493-4

EPISODE 4: GUNPOWDER, TREASON AND PLOT

PICK UP THE TRAIL AT WWW.AQAGCSEMATHS.WORDPRESS.COM



I'm too late! Moriarty's getting away... in a SUBMARINE!

Hang on... he's dropped something on the pier. It looks like...?

It's a maths book! And there's something written inside.

An ELECTROMAGNETIC PULSE weapon! That's why Moriarty needed the Devil's Eye ruby. If it goes off it will destroy every electronic device in London...

GCSE MATHEMATICS for Middle sets

LASER-PUMPED FLUX COMPRESSION GENERATOR

Flux compression $\sim 4 \times 10^7$ GAUSS

DEVI'L'S EYE RUBY = LASER ACTIVE MEDIUM

Super-conducting ring

multi-shock chromium laser

Some type of ANTENNA needed

TARGET COORDINATES: FG DG, CK EE

tate modern? No. Need more people to see

Blast. He's written the coordinates of the target in some sort of code. Maybe if I crack it I can get there in time to disarm the EMP weapon!?

WHERE NEXT?

Crack Moriarty's code to find the coordinates of the target. Use the map to help you.

GRADE E / / A03 PAGES 400-2

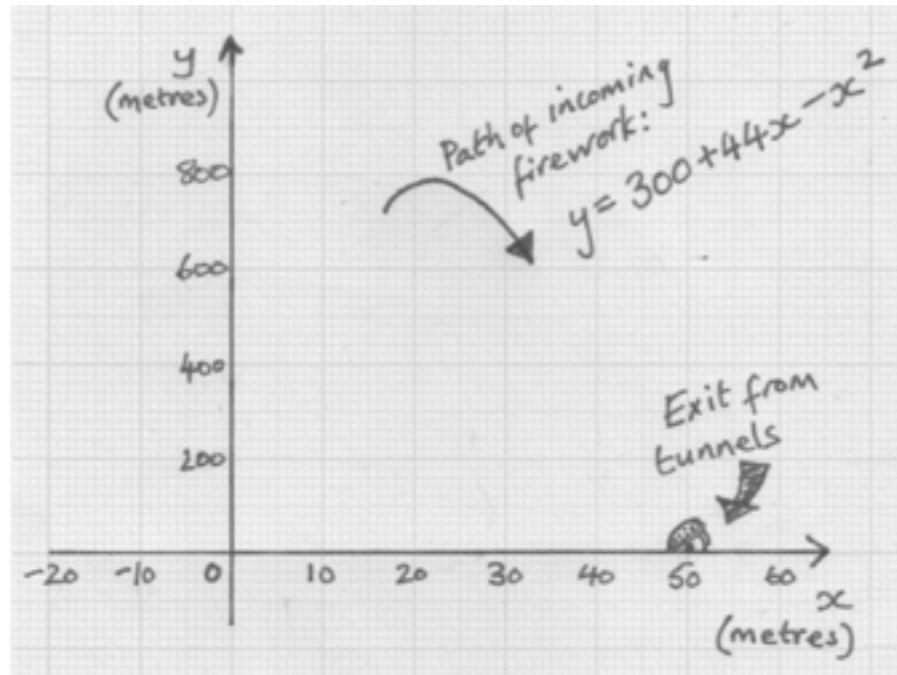
TO BE CONTINUED...

WATSON'S WORKSHEET: EPISODE 4

THE SCIENCE OF DEDUCTION

Track down Moriarty by working out how far away from the tunnel exit the firework was launched from.

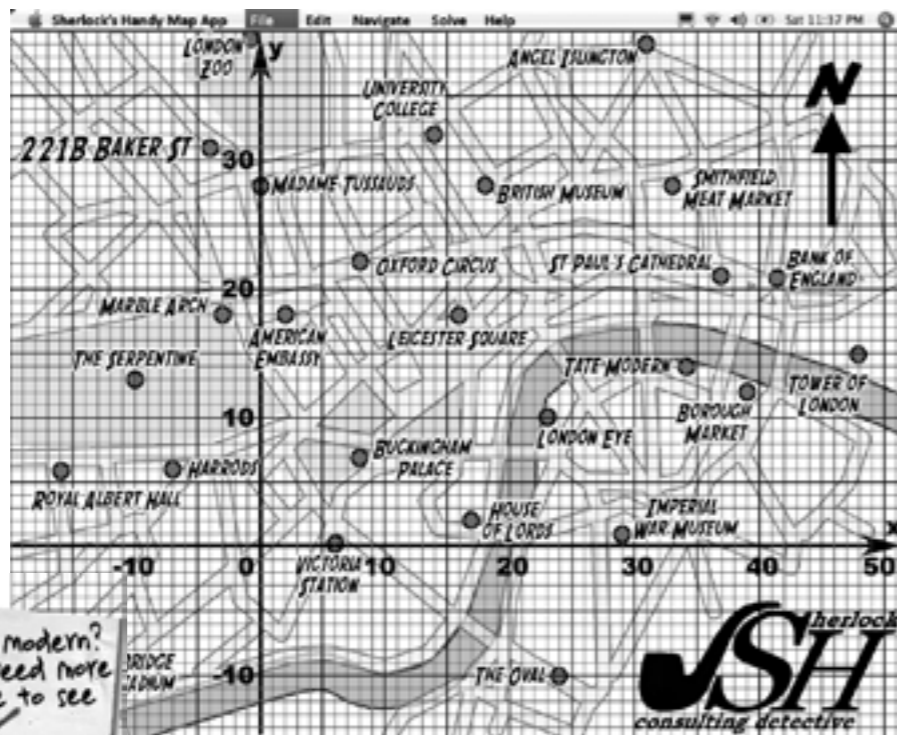
Explain how you deduced your answer.



WHERE NEXT?

Crack Moriarty's code to find the coordinates of the target.

Use the map to help you.



PICK UP THE TRAIL AT WWW.AQAGCSEMATHS.WORDPRESS.COM

EPISODE 4 MAP AND SOLUTION



The Science of Deduction

The firework was launched 56m from the tunnel exit.

Drawing the graph of $y = 300 + 44x - x^2$ shows that the path of the firework passes through the tunnel exit at (56, 0) and at the point (-6, 0), a distance 56 m from the tunnel exit.

Where Next?

The next location is Oxford Circus.

Moriarty has crossed out FG DG as a code representing Tate Modern. Substituting numbers for letters using A=1, B=2 etc would give 6 7 4 7 for this code. The coordinates of Tate Modern are (34, 14). Subtracting 3 from each digit in the code would give these coordinates.

Using the same substitution for Moriarty's target code, CK EE, gives 3 11 5 5. Subtracting 3 from each digit gives the coordinates 0 8 2 2. The coordinates of Oxford Circus are (8, 22). This tallies with Moriarty's requirement to have more people present.

SHERLOCK HOLMES & THE MYSTERY OF THE DEVIL'S EYE

SH *herlock*
consulting detective

Longman
by appointment to
Longman Textbooks

Wednesday 17 November 2010

5.53 pm: LOCATION En Route to Oxford Circus



Grab that cab Watson! We need to get to Oxford Circus sharpish.

I've hacked into the Central London power grid on my phone...

Each distribution node splits the available power in the given ratio.

<<<<Official transcript>>>>
17 November 2010/5:53 pm

Holmes/
It makes perfect sense Watson. Moriarty needs a giant antenna to transmit his electromagnetic pulse weapon.

Watson/
But there's no 'giant antenna' at Oxford Circus?

Holmes/
Don't you see Watson? The Christmas lights are being turned on at 6pm. If Moriarty channels enough power through the circuit...

Watson/
Well how much power does he need to trigger the EMP?

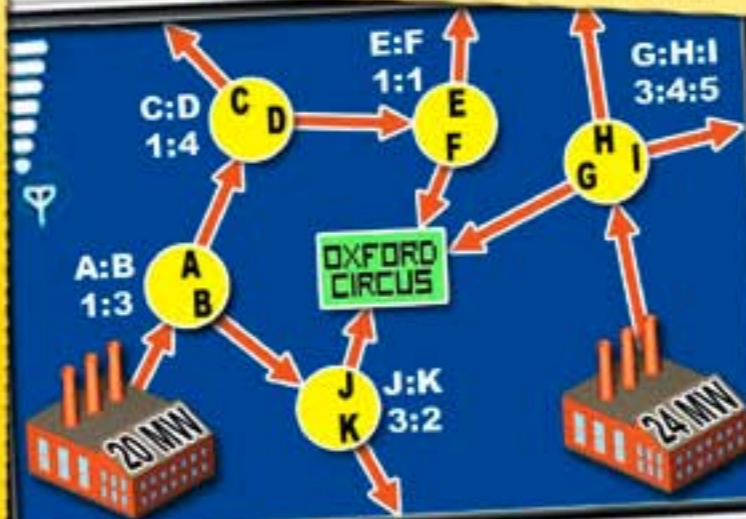
Holmes/
At least 18 Megawatts...

THE SCIENCE OF DEDUCTION

Use ratios to work out the amount of power being routed to Oxford Circus in Megawatts.

Does Moriarty have enough juice to set off his EMP device?

GRADE C // A02
PAGES 116-119



EPISODE 5: TRIPPING THE LIGHT FANTASTIC

PICK UP THE TRAIL AT WWW.AQAGCSEMATHS.WORDPRESS.COM

6.08 pm: LOCATION Oxford Circus, London, W1



Ooh... pretty. If I didn't have a crime to solve I'd go shopping...

We're too late. The lights are already on. Thank God there wasn't enough power to trigger the weapon.

I can't believe Moriarty is going to let it go at that.

Hang on... what's that commotion on Regent Street?

There's something going on down by the Apple Store...



Every iPod in the shop is stuck at the same point on one song.

The remaining time is blanked out? Is that important?

WHERE NEXT?

Can you unravel Moriarty's little joke and work out where he's sending Holmes and Watson?

GRADE E // A02 PAGES 358-9

TO BE CONTINUED...

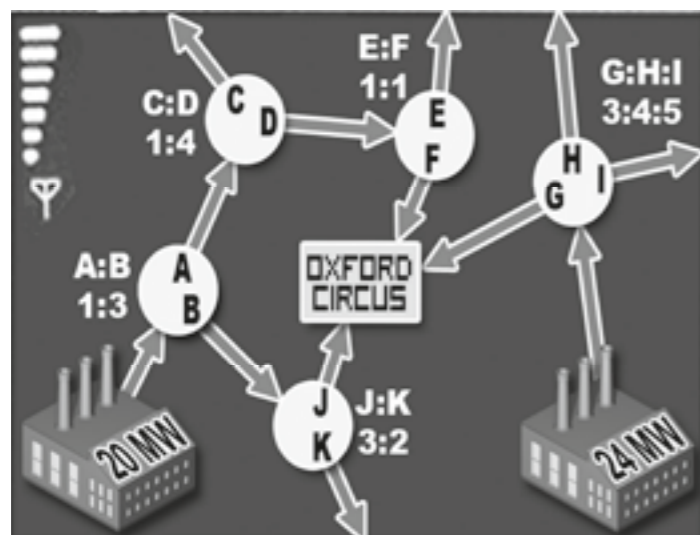
This has Moriarty written all over it. This certainly isn't over yet Watson...

WATSON'S WORKSHEET: EPISODE 5

THE SCIENCE OF DEDUCTION

Use ratios to work out the amount of power being routed to Oxford Circus in megawatts

Does Moriarty have enough juice to set off his EMP device?



Moriarty needs 18 MW of power to trigger the EMP device.

WHERE NEXT?

Can you unravel Moriarty's little joke and work out where he's sending Holmes and Watson?

Hint: Work out the time remaining on the song. Can you find more than one clue to point you in the right direction?



PICK UP THE TRAIL AT WWW.AQAGCSEMATHS.WORDPRESS.COM

EPISODE 5 MAP AND SOLUTION



The Science of Deduction

No.

A (5 MW) D (4 MW) F (2 MW)

B (15 MW) J (9 MW)

G (6 MW)

In total there are $2 + 9 + 6 = 17$ MW being diverted to Oxford Circus: not enough to trigger the EMP.

Where Next?

The next location is 221B Baker Street.

The song duration is 6 minutes and 8 seconds. 3 minutes and 47 seconds have elapsed, which means the 2 minutes and 21 seconds remain. (221). The song indicates that it is side B. Finally, track 2 of Gerry Rafferty's City to City album is 'Baker Street'.

SHERLOCK HOLMES & THE MYSTERY OF THE DEVIL'S EYE



Longman
by appointment to
Longman Textbooks

Wednesday 1 December 2010

9:20 am: LOCATION 221B Baker Street, London NW1



There's no place like home...



A mystery package. And I recognise that handwriting

Another note from Moriarty!
Surely he knows I'd never
join him... but I can't let him
detonate the EMP on
Christmas Day!

<<<<Official transcript>>>>
1 December 2010/9:26 am

Holmes/
The trail's gone cold Watson.
There's nothing for it but
to cross our fingers and hope
Moriarty decides not to use
the electromagnetic pulse
weapon.

Watson/
Oh well... that sounds like
the post. Maybe there will
be some Christmas cards to
cheer us up!

Holmes/
This doesn't look like a
Christmas card...

Sorry if my little wild goose
chase has left you a little
under the weather - maybe
it was something you EIGHT!
You see, I had to know just
how good you were Holmes?
And you've passed my test!
Join me. When the power of
my EMP is demonstrated
governments will bow down
before me. I think Christmas
Day will do nicely for
starters... I never much liked
the Queen's Speech anyway.

EPISODE 6: PIECES OF EIGHT

PICK UP THE TRAIL AT WWW.AQAGCSEMATHS.WORDPRESS.COM

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THE EXAMINER

FREE TICKETS!
LAING to the new Anthony Gormley exhibition
SEE PAGE 26 FOR DETAILS

New jobs at power station

Locals baffled
By AMY ORRIT

Local residents were baffled when a new power station was announced in the 1970s. Last year work started on a new power station in the area and many are being made in the area and others are being made in the area and others are being made in the area.

Police no closer to catching Devil's Eye Ruby thief
By TOM BAILEY

A wild goose chase of clues about the theft of the Devil's Eye Ruby has led police to a new suspect in the hunt for the thief.

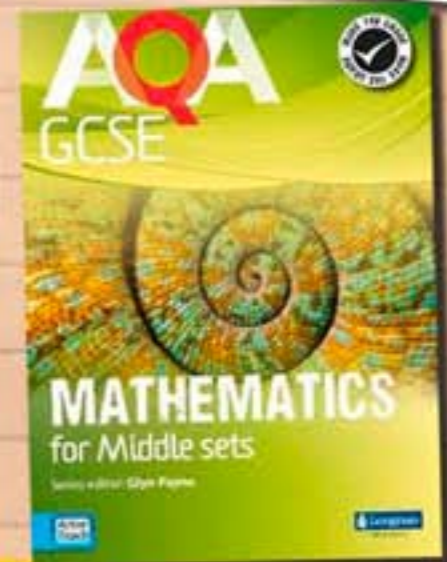
Slippery customer
A single customer has been slipping on the stairs at a shop in the city and has been injured.

PROFESSOR AS AND AS
The author of the book 'The Devil's Eye Ruby' has been awarded a prize for his work.

Moriarty's package was wrapped in newspaper!?



Strange...there was a Christmas tree ornament in the package?!



The only clues we've got left to go on are the newspaper page and that maths book Moriarty dropped by the river!

WHERE NEXT? SOLVE THE MYSTERY OF THE DEVIL'S EYE

Holmes will never join Moriarty in his evil plan. But if Moriarty manages to set off the weapon on Christmas Day it will cause havoc.

Help Holmes stop Moriarty by finding the secret location. Use the newspaper cutting to help you and write down all the clues you can find.

THE EXAMINER

WEDNESDAY 1 DECEMBER 2010

BRITAIN'S MOST INQUIRING PAPER



BUFFY-TASTIC
Former Buffy the Vampire Slayer star David Boreanaz stars in new cyber terrorism-disaster movie. FREE tickets on page 7.
BOREANAZ: Fighting crime

FREE TICKETS!

LAING to the new Anthony Gormley exhibition
ART GALLERY SEE PAGE 26 FOR DETAILS



New jobs at power station

Locals baffled

by AMY ORRIT

Industry leaders were baffled and delighted last week when a mystery benefactor announced the purchase and planned re-opening of Carville Power Station. As many as 250 new jobs could be created.

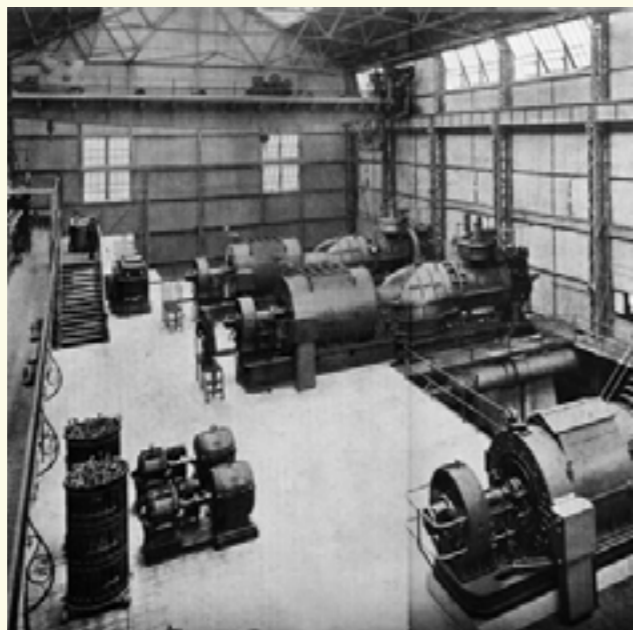
Disused

The former coal-fired power station has not produced power since it was decommissioned in the 1970s. Late last week deliveries of copper wire and superconducting coils were being made to the site and experts say Carville could be generating electricity within days.

Jump start

A spokesman for British Energy said that when the power station is brought back on-line it could generate up to 25 Megawatts of electrical power.

full story page 9



REFIT: The turbine hall at Carville power station

MATHS TEACHER seeks inquisitive F w/GSOH. Must like codes and looking through maths books for clues. Six of the best? See (242-13) for your starter.

GINGER NINJA, 26. Well connected M, twenties, seeks eligible F of noble birth for continuation of bloodline. I'm third in line so you'd better be first. (212-17)

HANDSOME, 41-years young arch criminal WLTM failed super-sleuth for fun, laughs, national disaster and more? We could make wonderful mayhem together. Come alone. Include code 26435 in your text message when responding. (158-23)

OUTDOORSY TYPE, 12. No specific gender. Exhibitionist, but getting a bit rusty now. Seeking partner with solid foundation and steely resolve. (474-28)

KOREAN DICTATOR, 69. So lonely running an axis-of-evil country. Looking for companionship and fun. Let's push the red button together. (368-15)

CANNY LASS seeks lad for candlelit dinners... let's make electricity a thing of the past. (404-17)

Police no closer to catching Devil's Eye Ruby thief

by TOM RAIRY



PRICELESS: As well as being valuable gemstones rubies are used in lasers

A wild-goose chase of clues placed deliberately at key London landmarks have left police struggling to make progress in the high-profile Devil's Eye Ruby case.

Slippery customer

Despite enlisting famous detective Sherlock Holmes, little or no progress has been made tracking down the thief.

full story page 13



- Down**
- 12²
 - Number of cm² in 2 m²
 - Gradient of 2y - 24x = 10
 - Sum of internal angles in pentagon
 - Mean of 960, 1210, 1300 and 1390
 - Square root of 625
 - Solve 18 - 2x = x - 51

Across

- 3 Opposite of bearing 022°
- 4 (30 - 12)² + 100 × 8³
- 6 800 reduced by 20%
- 7 Smallest 3-digit prime

- 8 Opposite of bearing 022°
- 9 The 201st term of this sequence: 25, 40, 55, 70...
- 11 One solution of 2x + y = 90
- x - y = 15

NEED A CLUE? Visit <http://tinyurl.com>

MORE OFFERS INSIDE Win Dan Brown books and DVDs... Signed Alan Shearer shirt

EPISODE 6 SOLUTION

Where Next?

The final location is the Angel of the North. There were eight clues in the newspaper, and an angel Christmas ornament in Holmes' package.

Clue 1

David Boreanaz (the actor on the top left of the newspaper clipping) plays the character "Angel" in *Buffy the Vampire Slayer* and spin-off series *Angel*.

Clue 2

The exhibition advertised is at the Laing Gallery, which is in Newcastle. The artist mentioned, Anthony Gormley, is the artist who designed the Angel of the North.

Clue 3

The main news story refers to Carville Power Station being reopened. Carville Power Station is in Wallsend, near Newcastle. The article mentions the power station could provide 25 MW of power: more than the 18 MW required by Moriarty's EMP in Episode 5.

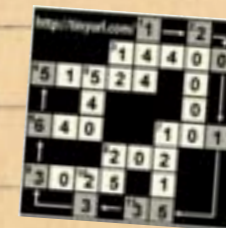
Clue 4

The special offers at the bottom of the newspaper advertised Dan Brown books. Dan Brown wrote a book called "Angels and Demons". Also advertised was a signed Alan Shearer shirt. Alan Shearer played most of his career at Newcastle United, and a large Alan Shearer shirt was famously draped across the Angel of the North soon after its construction.

Clue 5

The crossword solution is given below.

If you visit the <http://tinyurl.com/1201533365> you will find a picture of the Angel of the North.



Clue 6

The first entry in the lonely hearts column refers to looking in maths books for clues. In Holmes' case notes he mentions using the *Longman AQA GCSE Mathematics Middle Sets* book as a clue. Each pair of numbers in the lonely hearts column refers to a word in this book. The first number is a page number and the second number is a word number. So for example the first word is the 13th word on page 242. The six words spell out WEAPON IN HEAVENLY IMAGE IN GATESHEAD. A reference to the location of the Angel of the North.

Clue 7

The third lonely hearts advert is from Moriarty! He asks Holmes to include the code 26435 in his text message when responding. If you enter these digits in to a text message with predictive text messaging on it will spell out the word ANGEL.

Clue 8

The fourth lonely hearts advert is for an "Outdoorsy Type". This advert refers to the Angel of the North, which is constructed from steel and is 12 years old.

SHERLOCK HOLMES & THE MYSTERY OF THE DEVIL'S EYE

SH *herlock*
consulting detective

Longman
by appointment to
Longman Textbooks

Wednesday 15 December 2010

7:45 pm: LOCATION Angel of the North, Gateshead



THE ANGEL OF THE NORTH. The perfect hiding place for the DEVIL'S EYE, and the steel structure would act as a GIANT ANTENNA for Moriarty's electro-magnetic pulse weapon. He could take out all of Newcastle...



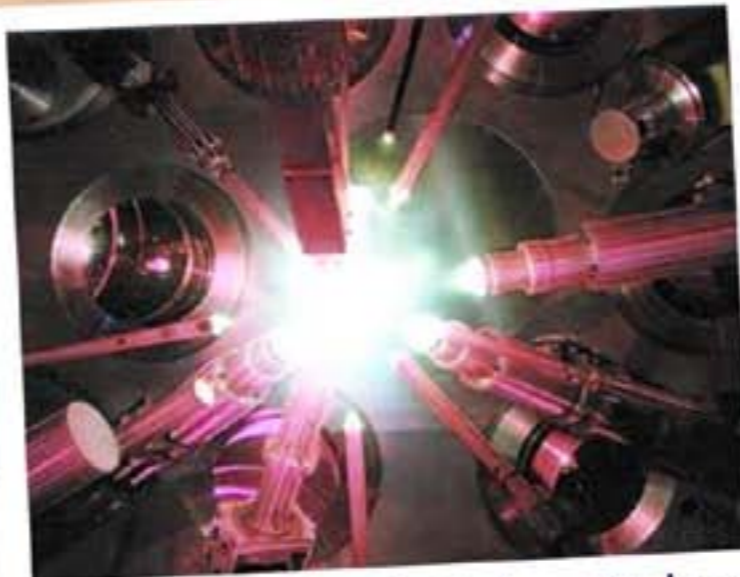
Too much snow. The trains were dreadful...



So I had to 'borrow' the police Helicopter again

EPILOGUE: ANGELS & DEMONS

READ THE FULL STORY AT WWW.AQAGCSEMATHS.WORDPRESS.COM



Got down before Moriarty could trigger the weapon and take out the chopper. But the weapon was being powered up.



Watson spotted the ruby and made a grab for it...



An AIRSHIP... well at least you've got to give Moriarty points for style...

Got it!
Without the Devil's Eye Ruby Moriarty couldn't fire the EMP. But where had he got to...?

CASE CLOSED

Holmes has recovered the Devil's Eye, and saved Christmas! But Moriarty is still on the loose. When will the arch-criminal strike again? For now at least, the UK can breathe easy again.

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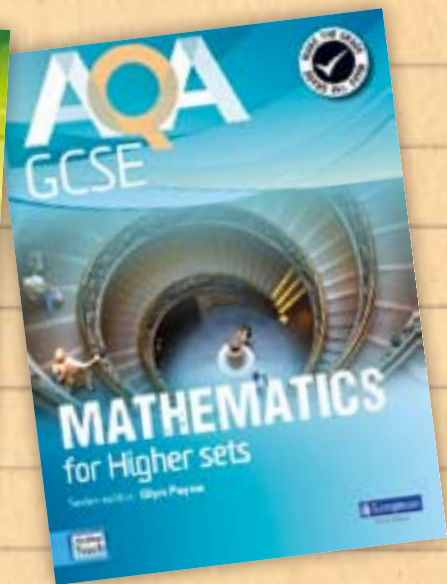
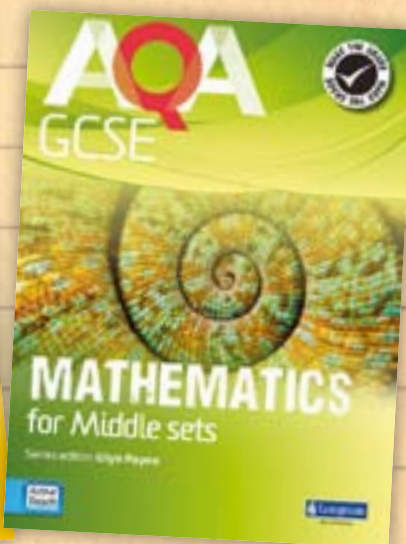
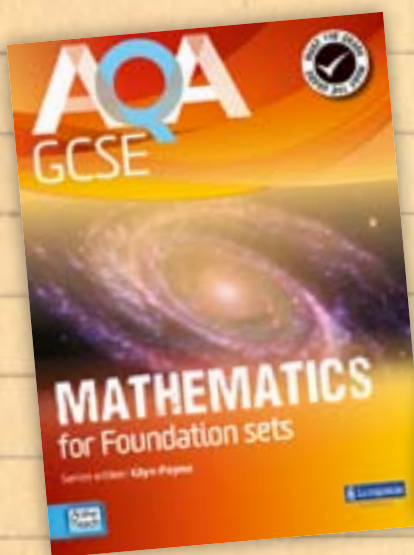
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