MATHS PASSPORT

PASSPORT
TWO

FOUNDATION

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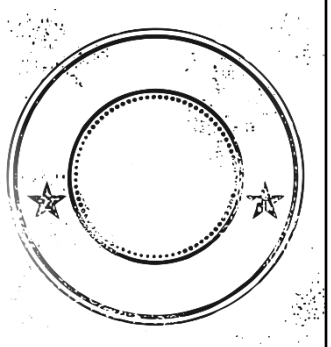
Contents

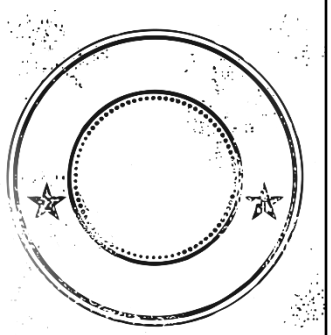
Number

TOPIC	VIDEO	PRACTISE	
Time To be able to calculate arrival and departing times.	http://goo.gl/4VPoLS	http://goo.gl/RMVXoR	

Exam Question

a) School starts at 8:40am and finishes at 3:00pm how long is the school day?

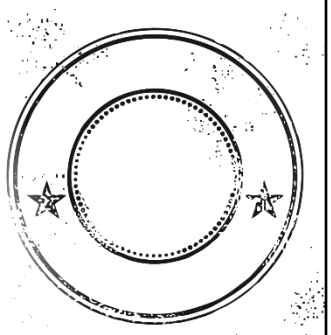
b) Mr Tait sets off for school at 7:48am and takes 27 minutes to get to school. What times does he arrive at school?

TOPIC	VIDEO	PRACTISE	
Directed Numbers To be able to apply the rules of positive and negative numbers	http://bit.ly/1QzqOCm	http://goo.gl/Bpz5wt	

Exam Question

Complete the table for temperatures throughout the day.

Morning	Change	Evening
-3^o	Rise 5^o	2^o
6^o	Fall 8^o	
-2^o		-8^o
	Rise 11^o	4^o

TOPIC	VIDEO	PRACTISE	
Number Types To be able to identify factors, multiples, prime, square and cubic numbers.	http://bit.ly/1we4u5x	http://goo.gl/lt4QlU	

Exam Question

50, 64, 10, 3, 47, 125, 27, 18

Identify the following from the above list of numbers.

a) Multiple of 6: _____
b) Factor of 24: _____
c) Prime number: _____
d) Square number: _____
e) Cube number: _____

Algebra

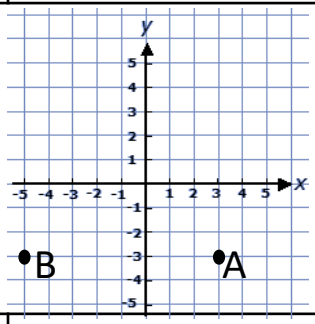
TOPIC	VIDEO	PRACTISE	
Co-ordinates To be able to plot and read coordinates in all four quadrants	http://goo.gl/fcYtFr	http://goo.gl/e7o4ai	

Exam Question

a) Identify the coordinates of
   i) Point a _____
   ii) Point B _____

b) Plot the coordinate (-1,5) and label C.

c) Identify the shape points ABC makes.
   _____



Simplifying To be able to collect like terms together.	http://bit.ly/ZL8bnT	http://goo.gl/ieVjou	

Exam Question Simplify the following expressions

a) $3a + 6b + 5a + b$

b) $a + a + a + a - a$

c) $5b - 3a + 2b + 7c$

Sequences To be able to calculate the missing terms in a sequence.	http://goo.gl/BFSGmJ	http://goo.gl/kGkgCn	

Exam Question What are the next two terms in the sequence?

a) 5, 7, 9, 11, ___, ___

b) 12, 7, 2, ___, ___

What are the missing terms of the sequence?

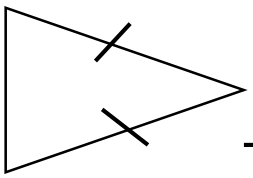
c) 9, ___, ____, 21, ___, 29

Shapes and Measures

TOPIC	VIDEO	PRACTISE	
Shapes To be able to accurately identify a shapes name.	http://goo.gl/JG9a3S	http://goo.gl/AHk2oo	

Exam Question

Here is a triangle, write down it's mathematics name.



_____

What is the name of this 3D shape?

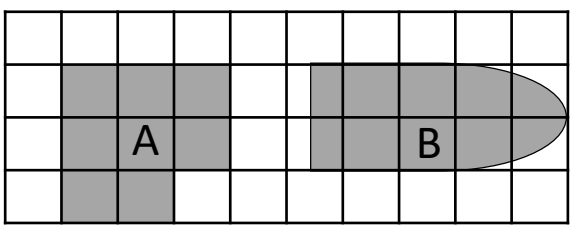
_____

Area To be able to find the area by counting the squares.	http://bit.ly/1M104W0	http://goo.gl/gVDS8v	

Exam Question

Estimate the area of the following shapes.

$\square = 1cm^2$



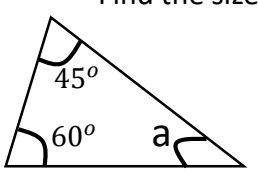
Shape A = _____

Shape B = _____

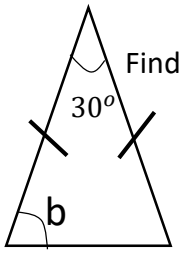
Angles To be able to find missing angles inside triangles	https://goo.gl/XHuFxs	https://goo.gl/NmKazR	

Exam Question

Find the size of angle a.



Find the size of angle b.

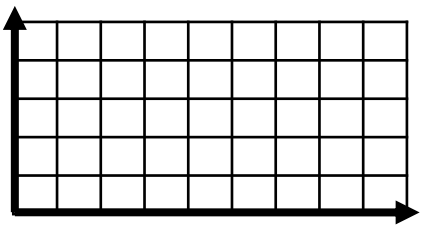


Statistics

TOPIC	VIDEO	PRACTISE	
Bar Charts To be able to accurately draw a bar chart and complete a frequency table.	http://goo.gl/7cfZxf	http://goo.gl/foVckr	

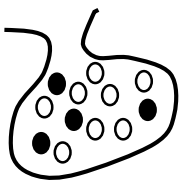
Exam Question Complete the frequency table and draw a bar graph. Mr Laidler asks 20 students if there going to the prom.

Prom	Frequency
Yes	11
Maybe	
No	4



Probability To be able to calculate the probability of an event happening.	http://goo.gl/PbnOy6	http://goo.gl/Vcv57C	

Exam Question



There are twelve marbles in a bag.

a) What is the probability of choosing a white marble?

b) What is the probability of not choosing a white marble?

Outcomes To be able to list all the possible outcomes.	http://goo.gl/DzEMSU	http://goo.gl/bhxjGt	

Exam Question

The Maths department drink, tea (T), coffee (C) and water (W). Mrs Martin asked three teachers what they would like to drink. List all the possible outcomes when nobody drinks the same drinks.

T1	T2	T3
T	C	W

T1	T2	T3

Number

Evaluate the following:

a) $3^2 \times 3^4$

b) $5^6 \div 5^2$

c) $(7^2)^3$

Barbie was in a 15% sale. Work out the sale price.

You buy a new car for £2,500. Your car depreciates in value by 20%. How much is it now worth?

I set off for work at 6:48am and arrive at 8: 15am. How long does my journey take?

Put these numbers in ascending order.

0.45, 0.405, 4, 0.5, 0.045, 0.004

Calculate the following

a) $3 \times 4 + 6 \div 2$

a) $4 + 6 \times 18 \div 9$

3 adults and 5 children go to the zoo.

Adult tickets cost £12.50 and child tickets cost £7.40.

You only have £80, is this enough money?

Calculate the following:

a) $\frac{4}{5} - \frac{1}{4}$

b) $\frac{1}{3} \times \frac{3}{4}$

c) $\frac{7}{8} \div \frac{4}{5}$

Algebra

Find the midpoint of the following coordinates.

(4, 6)

(10, 8)

Solve the following Equations.

$2x + 4 = 18$

Example the following

a) $3(x + 4)$

b) $7(2x - 5)$

c) $x(x + 8)$

Simplify

a) $a + a + a + a - a$

b) $3a + 5b - 2a + 4b$

c) $7a - 6b + 2a - b$

Factorise the following expressions:

a) $4x + 20$

b) $12x + 28$

c) $3y^2 + 12y$

Plot the graph of

$y = 2x + 5$

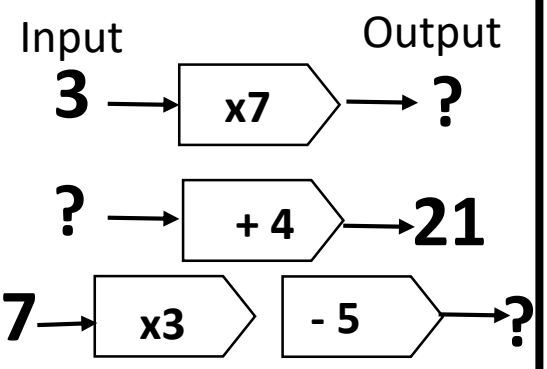
Between the values of

$-4 \leq x \leq 4$

Solve using trial and improvement to 1dp.

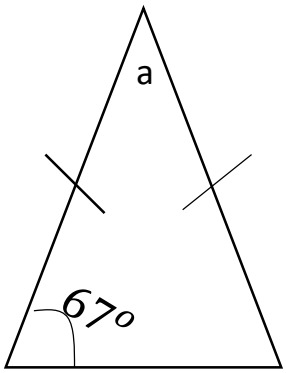
$x^2 + 2x = 40$

Find the missing values.

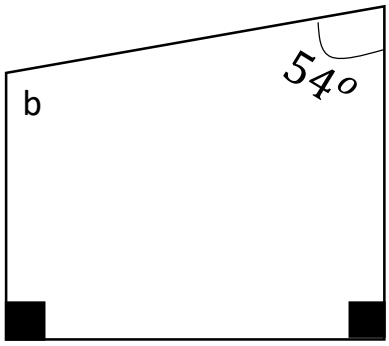


Shapes and Measures

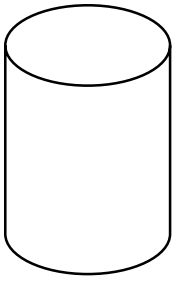
Find the size of angle a.



Find the size of angle b.

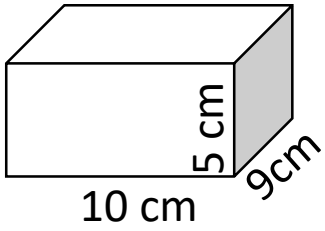


Name the shape

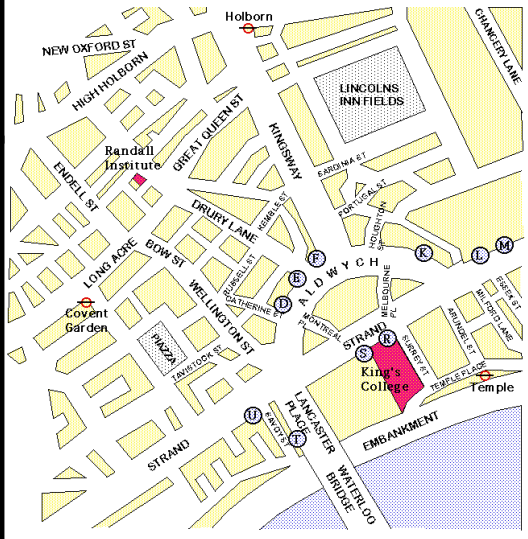


Sketch an acute angle.

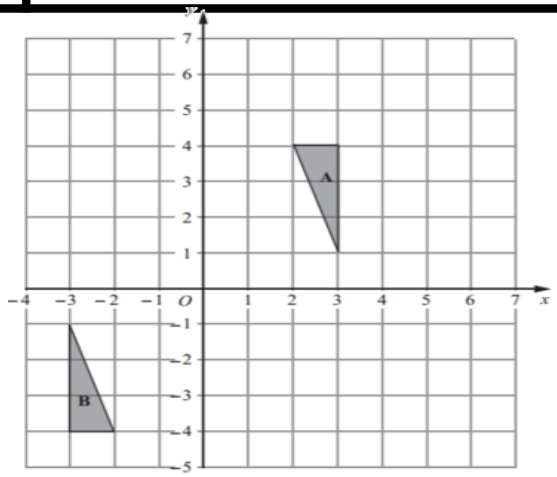
Calculate the volume of the cuboid.



Write instructions for the route from Convent Garden to Holborn Station.



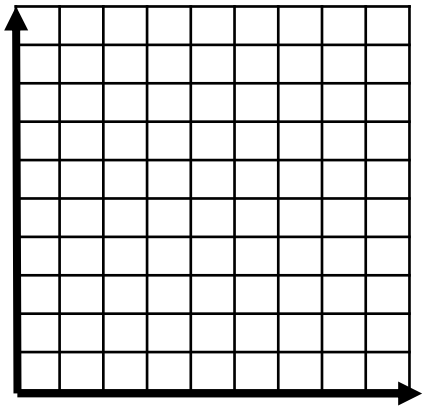
Describe fully the single transformation that maps A to B



Statistics

Draw a bar chart for the following information.

Colour	Frequency
$Yellow$	6
$Green$	9
$Blue$	5



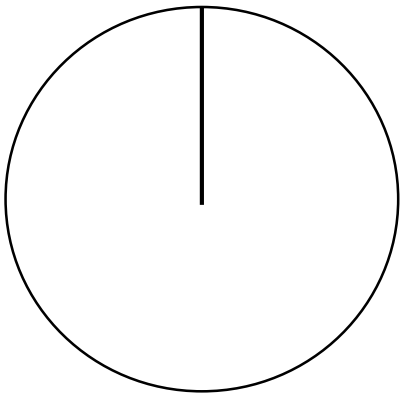
The probability of winning a game of tiddly winks is $\frac{2}{5}$. If I play the game 150 times , how many times should I expect to win?

Find the mean, median, mode and range for the following numbers.

3, 12, 5, 8, 6, 6

Draw a pie chart for the following information.

Colour	Frequency	
$Yellow$	6	
$Green$	9	
$Blue$	5	



Calculate the mean from the table

Letters Delivered	Frequency
0	9
1	7
2	8
3	6

What is the probability of choosing yellow.

Colour	Probability
Blue	0.17
Yellow	
Green	0.36
Pink	0.28

Notes

GCSE Revision

Available	Tier	Grades
Passport One	Foundation	1-4
Passport Two	Foundation	3-4
Passport Three	Foundation/ Higher	4-5
Passport Four	Higher	5-6
Passport Five	Higher	7-9

Exam Tips

1) Highlight key words and measurements in the exam questions with a yellow highlighter.
E.g. 3 significant figures.

2) Show all of your working out. Whatever you type into your calculator should be written down as well.

3) Make sure your working out is clear by using sub headings if necessary.

4) Remember your units of measure on answers to the question.

5) Remember you can sometimes break a task into separate parts by using the sentences.

6) Make sure you know how to reset your calculator and check it is in degrees mode.