



## ALL IN ONE PLACE BASE CAMP MATHS ADVANCED TEST 1 Maximum score 150

### INSTRUCTIONS

- There is no time limit for the test
- Work quickly but accurately
- Only ask for help once you have completed the test
- Only use a calculator if the question states you can
- Write your working and answers on this test
- Use the solution sheet to check your work

## ABOUT MATHS TESTS

You must be up for a challenge! Not to worry. Doing tests at the advanced level means you have an excellent grasp of Maths knowledge and skills. So just do it!

### *use and apply what you learn*

Most of what you learn at school, at home or from your friends, you can use and apply in your daily life.

You can use your tests and scores to

- see what you're good at
- identify concepts you still need to work on
- improve time management
- see Maths happen in daily life
- apply what you've learnt at school and at home
- prepare for school and 11+ exams and tests



## ADVANCED TESTS

Maths Advanced tests are for Year 6 or Year 7 students. The tests cover the essential concepts from your Maths studies at primary school. Plus, there's a bit extra to test how good you are at applying what you know. Aim for 75% and be content with that score. More than that – go straight to GCSEs.



## DOING THE TEST

If you've done any of the basic or intermediate tests, you'll know what to expect now. The same as a class test, but you don't have to worry about time too much, teachers or classmates.

**TIME** There is no time limit for this test so you don't get anxious or stressed – you still need to work accurately and manage your time well. Good time management is a basic skill to apply in any task, not only tests.

**BANK MARKS** If you can do a question, leave it and return to it later; it's good to build a bank of marks – you know that you are achieving and build your confidence. Getting marks helps you to get in the zone and do well.

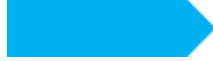
**SHOW AND TELL** Show all working – teachers like to see how you got an answer; plus, you'll get some marks even if the answer is incorrect. Showing your working means showing you care.

**NEATLY NOW** Write neatly and make sure your answers are clear to that anybody can read them. The same goes for drawing – label and use a ruler. Neat works makes a good impression, shoddy stuff, no matter how good, will get you on the wrong side of your teacher or examiner.

**CHECK NOT CHOKE** Check your work, but don't over check – sometimes people check too many times and change right answers into wrong ones.

**SHOW THEM HOW TO DO IT** Work independently without help from computers, books, or anybody. Don't daydream, think about your plans for later, or waste time – this is your time to show everybody how you do it!





## THIS IS THE REAL THING!

Time to start the real thing. There are 150 marks in the test. You'll get some marks as easily as breathing. Others mean you'll have to think about how to use and apply several Maths concepts and skills to get the right answer. The questions are not arranged from easy to the most difficult, but have a random order. This structure will help you prepare for school tests or 11+ examinations.

Don't forget *time, bank, neatly, show, check, your work*



### JUMP 1

Use this product to answer the questions

$$616 \times 11 = 6776$$

a. What is the value of  $61.6 \times 1.1$ ?

**[1 mark]**

**ANSWER** \_\_\_\_\_

b. What is the value of  $67.76 \div 0.616$ ?

**[2 marks]**

**ANSWER** \_\_\_\_\_

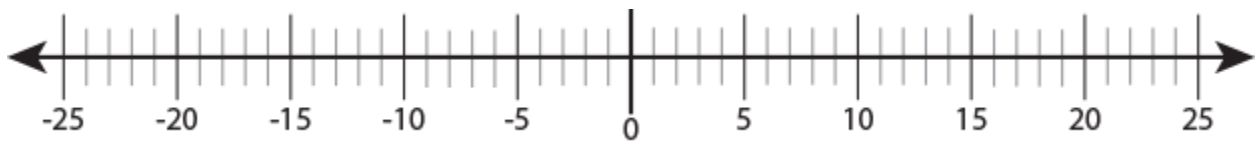


**JUMP 2**

a. Mark the types of number described in the table on the number line.

[6 marks]

The number	Mark the number line with
The product of 2 and 4	<b>P</b>
The answer to $15 \div -3$	<b>N</b>
A prime number between 5 and 10	<b>B</b>
A multiple of 8 greater than 20	<b>M</b>
A factor of 40 greater than 15	<b>F</b>
$2^3 - 2^2$	<b>C</b>



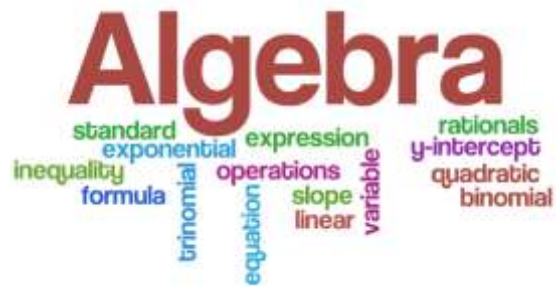
**JUMP 3**

a. If  $x = 2$ ,  $y = 11$  and  $z = -5$ , what is the value of

$$2x^2 - 2(y - z)$$

[2 marks]

ANSWER \_\_\_\_\_

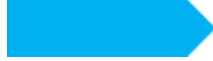


b. Find the value of  $d$  in the equation

$$12 + 3d = 84$$

[1 mark]

ANSWER \_\_\_\_\_



**JUMP 4**

Jamie can run 200 m in 28 seconds.  
Amira can run the same distance in 1.5 seconds less than Jamie.

a. How long does it take Amira to run 200 metres?

**[1 mark]**

**ANSWER** \_\_\_\_\_ s

b. The school record for the race is 25.04 seconds. By how much does Amira need to improve her time if she wants to break the record?

**[2 marks]**

**ANSWER** \_\_\_\_\_ s



Jamie records his time for the 200 m for 10 days. His times are shown in seconds in the table.

Day	1	2	3	4	5	6	7	8	9	10
Time	28.5	28.7	27.7	28.3	28.1	27.1	27.7	28.4	27.4	26.9

c. What is the range of Jamie's times?

**[1 mark]**

**ANSWER** \_\_\_\_\_



**JUMP 5**

Louis, Claire and Alex are raising money to donate to the World Wildlife Fund. WWF is the world's biggest charity that supports the protection of animals, plants and the environment.

Louis collects £50 in two days from his friends and family. Claire gets involved in a street collection campaign for five days. The average daily donation to Claire's campaign is £24. Alex has cake sale each lunchtime for four days of a school week and makes £104 before deducting the cost of ingredients to make the cakes.



a. Who raised the most money on a daily basis?

[1 mark]

ANSWER \_\_\_\_\_

b. If Alex spent £28 on ingredients, what was his profit from the cake sale?

[1 mark]

ANSWER £ \_\_\_\_\_



g. What proportion of the total was raised by Louis? Express your answer in the simplest form.

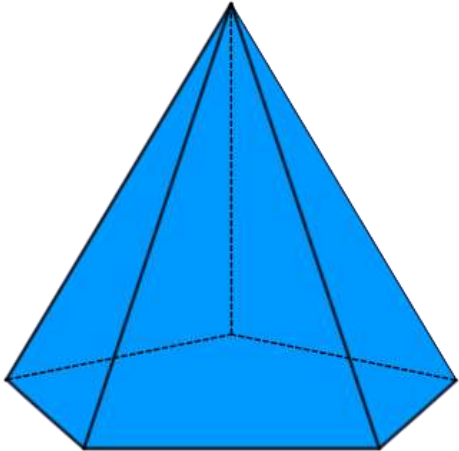
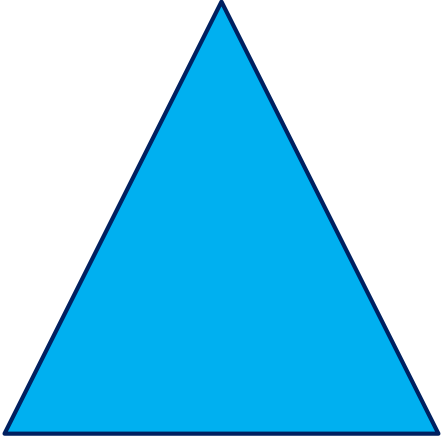
[2 marks]

ANSWER \_\_\_\_\_



**JUMP 6**

Examine the two shapes and then answer the questions.

SHAPE A	SHAPE B
	
Name	Name

b. Draw all the lines of symmetry on **SHAPE B**.

[1 mark]





c. Explain what **SHAPE A** and **SHAPE B** have in common.  
 [1 mark]

**ANSWER**

---



---



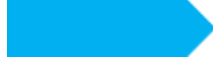
**JUMP 7**

The diagram shows a simple floor plan for a three-bedroomed house. The dimensions are in metres.



a. What is the length of the living area?  
 [1 mark]

**ANSWER** \_\_\_\_\_ m



b. What is the width of **bed 1** in centimetres?  
[2 marks]

ANSWER \_\_\_\_\_ cm

 **JUMP 8**

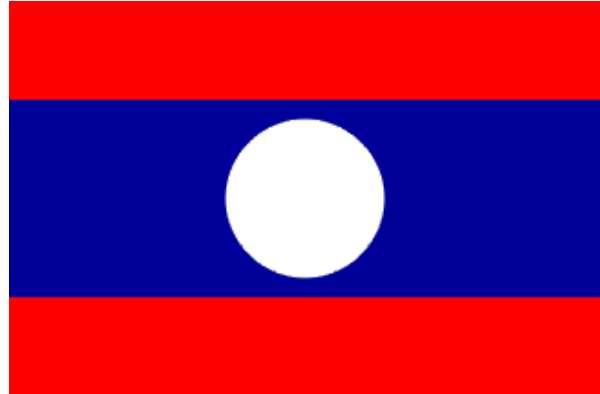
This is the national flag of Laos.

a. How many lines of symmetry does the flag have?  
[1 mark]

ANSWER \_\_\_\_\_

b. What is its order of rotation?  
[1 mark]

ANSWER \_\_\_\_\_



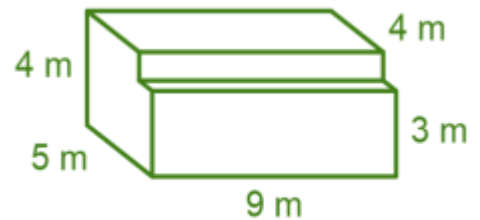
 **JUMP 9**

a. Calculate the surface area of this irregular solid.  
[3 marks]

ANSWER \_\_\_\_\_ m<sup>2</sup>

b. Calculate the volume of the solid.  
[3 marks]

ANSWER \_\_\_\_\_ m<sup>3</sup>







**JUMP 10**

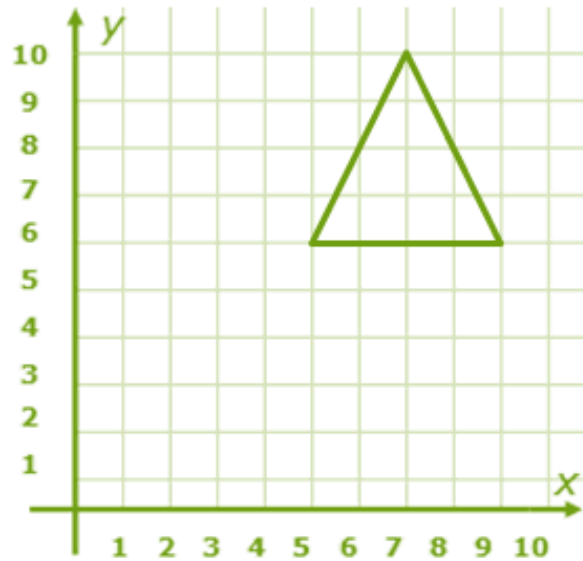
a. Write the **xy** coordinates of the apex of the triangle.

**[1 mark]**

**ANSWER** \_\_\_\_\_

c. Reflect the triangle in the line  $x = 5$

**[2 marks]**



**JUMP 11**

Put your BIDMAS into action and work out each answer.

a.  $20 - 20 \times 2$

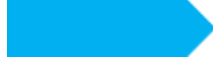
**[1 mark]**

**ANSWER** \_\_\_\_\_

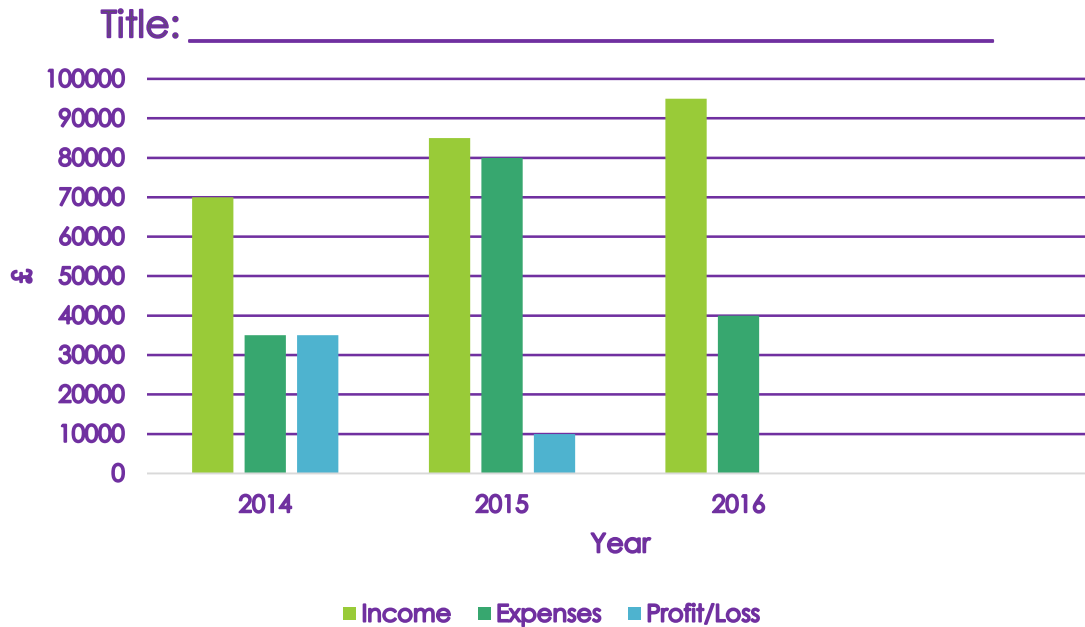
b.  $3^3 \div (5^2 - 4^2)$

**[3 marks]**

**ANSWER** \_\_\_\_\_



The bar chart shows the income, expenses and profit/loss for Pat's Paintball Palace for three years.



a. What was Pat's income in 2014?

[1 mark]

ANSWER £ \_\_\_\_\_

b. How much were Pat's expenses in 2016?

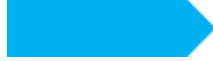
[1 mark]

ANSWER £ \_\_\_\_\_

d. In which year were Pat's expenses half of the total income?

[1 mark]

ANSWER \_\_\_\_\_



**JUMP 14**

Tyson has half the amount of money that Juan has. Kerry has four times as much money as Juan.

- a. The amount of money Tyson has can be represented by the variable  $x$ . Write an algebraic expression showing how much money the three friends have in terms of  $x$ .  
**[2 marks]**

**ANSWER** \_\_\_\_\_



- c. The friends have £330 in total. How much does each person have?  
**[3 marks]**

**Tyson** £ \_\_\_\_\_

**Juan** £ \_\_\_\_\_

**Kerry** £ \_\_\_\_\_



**JUMP 16**

Martin, Tess and their parents are going on holiday to Thailand. Their flight to Bangkok leaves London Heathrow at 9 o'clock on a Thursday evening. Thailand is 6 hours ahead of London.



- a. Express the time they leave London using the 24-hour clock.  
**[1 mark]**

**ANSWER** \_\_\_\_\_



c. The flight from London to Bangkok takes 10 hours. What will be the time in Thailand when they land in Bangkok?

**[2 marks]**

**ANSWER** \_\_\_\_\_

d. On what day do they arrive in Bangkok? Circle one option.

**[1 mark]**

<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>
------------------	-----------------	---------------	-----------------

**JUMP 17**

Martin and Tess get £200 spending money to share equally. The UK needs to be changed into Thai currency, Thai Baht or THB.

$$\text{£1.00} = \text{THB } 40$$

Tess exchanges her money at the airport because she heard that hotels in Bangkok charge a high commission.

a. The exchange bureau at the airport charges 2% commission. How much does Tess get when she exchanges all of her pounds?

**[3 marks]**

**ANSWER** \_\_\_\_\_

**JUMP 20**

Kevin and his mother are shopping for new curtains for Kevin's bedroom. The shop has three options that customers can buy material as shown in the table.

<b>1</b>	per metre	£3.50
<b>2</b>	per 3 m roll	£7.99
<b>3</b>	per 5 m roll	£12.50





b. Kevin's Mum decides to buy curtains by the metre and buys 9 metres. She gives the store owner two £20 notes. How much change should she receive? **[2 marks]**

**ANSWER** \_\_\_\_\_

## TIME TO CHILL!

Well done! Great work on this test!

Two more things for you to do before taking a good break

- work out your percentage
- decide how good you are at different Maths topics covered in this test



## YOUR PERCENTAGE

Add up your marks and write your percentage for the test in the table. Also decide what percentage you'd like to score next time.

<b>My score for this test</b>	<b>%</b>	<b>My score in the next test</b>	<b>%</b>
-------------------------------	----------	----------------------------------	----------





## MATHS TOPICS

Rate your understanding of each topic. Use **X** in each row showing your rating.



TOPIC	GOOD	OKAY	PRACTISE
Fractions and Decimals			
Percentage			
Word problems			
Currency Conversions			
Shapes and Properties			
Ratio and Proportion			
Units of Measurement			
Area, Volume, Perimeter			
Using graphs			
Drawing graphs			
Scale drawings			
Mean, Mode, Median			
Calculating Averages			
Using a Tally System			
Probability			
Using Number Lines			
Multiples, Factors, Primes			
Angles			
Time			
Coordinates			
Reflection and Translation			
Symmetry			
BIDMAS			
Algebra			