



# GCSE Mathematics

## Unit 1: Calculator **NOT** Allowed

Intermediate Tier

County Revision Paper 3b

[tinyurl.com/LARevP3b](https://tinyurl.com/LARevP3b)



Week beginning

**55 Minutes**

School: \_\_\_\_\_

Student Name: \_\_\_\_\_

Question	Maximum Mark	Mark Awarded
2	3	
4	6	
6	6	
8	4	
10	5	
12	3	
14	4	
16	6	

2. Circle either TRUE or FALSE for each of the following statements.

[3]

20% <u>off</u> £120 is the same as 80% <u>of</u> £120	TRUE	FALSE
$\frac{1}{2}$ of 60 is the same as $15 \div \frac{1}{2}$	TRUE	FALSE
$2^3$ is the same as $3^2$	TRUE	FALSE
$3^3$ is not the same as $(-3)^3$	TRUE	FALSE
Dividing a number by 100 is the same as multiplying by 0.1	TRUE	FALSE

Space for working:

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4. (a) Write down the next two numbers in the following sequence.

[2]

19    14    9    4    .....    .....

.....

.....

(b) Simplify the expression     $9r - 3s + 2r - 3s$

[2]

.....

(c) Using the formula     $3E = 2F + G$ , find the value of F when E = 8 and G = 6

[2]

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.....



8. State whether the following statements are true or false.  
You must give a reason for each of your answers.

(a) "All prime numbers have more than two factors."

[2]

True or False? .....

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.....  
.....  
.....  
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.....

(b) "All square numbers have an odd number of factors."

[2]

True or False? .....

.....  
.....  
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10. A regular polygon has six sides

(a) What is the size of its exterior angles?

[2]

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.....

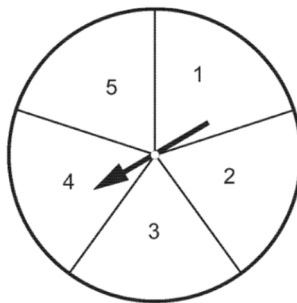
(b)

[3]

In answering this question, you must show all your construction arcs.  
Use a ruler and a pair of compasses to construct an angle of  $45^\circ$  at the mid-point of the straight line below.  
Label your angle  $45^\circ$ .



12. The spinner shown below and a fair coin are thrown together once.



(a) How many possible outcomes will there be? [1]

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(b) What will be the probability of getting the arrangement shown in the diagram? [1]

.....

(c) What will be the probability of getting an even number on the spinner and a head on the coin? [1]

.....

.....

14. (a) Arrange the following numbers in ascending order.

2100       $2.4 \times 10^{-3}$        $2.4 \times 10^3$        $10^3$

.....  
 .....  
 .....  
 .....  
 Smallest ..... Largest

[2]

(b) Evaluate  $6 \times 10^{13} + 9 \times 10^{13}$ , giving your answer in standard form.

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 .....  
 .....

[2]

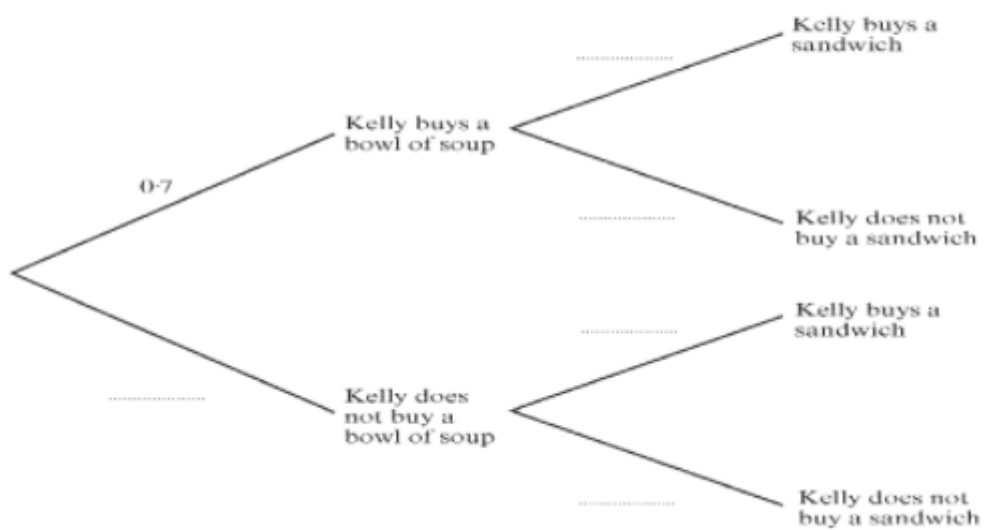
16. At lunchtime, the probability that Kelly buys a bowl of soup is 0.7.

The probability that Kelly buys a sandwich is independent of her buying a bowl of soup.

The probability that Kelly buys a bowl of soup **and** a sandwich is 0.28.

(a) Complete the tree diagram.

.....  
 .....  
 .....



[4]

(b) Find the probability that Kelly does not buy soup and does not buy a sandwich

[2]

.....  
 .....