

Name \_\_\_\_\_

Candidate Number \_\_\_\_\_

Room Number \_\_\_\_\_

# WITHINGTON GIRLS' SCHOOL

## ENTRANCE EXAMINATION 2018

### MATHEMATICS

### PAPER 1

TIME: 30 MINUTES

- Try to answer all the questions.
- Write your working and your answer in the space provided after each question.
- If you cannot answer a question, leave it and go on to the next one.
- Use any time you have left to check your answers and go back to any questions you have left out.

**CALCULATORS MUST NOT BE USED**

PAPER 1 TOTAL	
Marker's Initials	
Checker's Initials	

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**Section A**Do not  
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margin

1. Work out $246 + 655$    _____	2. Work out $428 - 244$    _____	1  1
3. Work out $46 \times 37$    _____	4. Work out $936 \div 4$    _____	1  1
5. Round 5 345 to the nearest 100    _____	6. Work out $73 + 28 + 37 + 82$    _____	1  1
7. Write down the next number in this sequence  1, 4, 9, 16, 25, 36, 49, .....		1
8. Write down the first 5 multiples of 7       _____		1
9. Fill in the box  $8 \times \square + 3 = 75$		1
10. $246 \times 135 = 33210$ . What is $248 \times 135$ ?    _____		1

PLEASE TURN OVER

## Section B

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In this section any fractions should be written in their **simplest form**.

For example,  $\frac{1}{4}$  is simpler than  $\frac{2}{8}$  and the mixed number  $1\frac{1}{4}$  is simpler than  $\frac{5}{4}$ .

1. Work out $2\frac{1}{4} + 3\frac{1}{12}$    _____	2. Work out $4\frac{1}{2} - 1\frac{7}{8}$    _____	1  1
3. Write $3\frac{5}{6}$ as an improper fraction    _____	4. Work out $\frac{4}{9}$ of 36    _____	1  1
5. What is 55% of 80?    _____	6. Work out $6\frac{1}{2} \div \frac{1}{2}$    _____	1  1
7. Write the fractions in order from smallest to largest  $\frac{27}{50} \quad \frac{13}{25} \quad \frac{3}{5} \quad \frac{7}{10}$    _____		1
8. Which is larger $\frac{3}{20}$ or 0.16?    _____		1
9. What number goes in the box?  $\frac{\square}{7} \text{ of } 63 = 54$		1
10. What is $\frac{3}{4}$ of 30% of 120?    _____		1

**Section C**

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<p>1. How many centimetres are in 0.52 metres?</p> <p style="text-align: right;">_____ cm</p>	<p>2. Work out <math>6.6 \times 30</math></p> <p style="text-align: right;">_____</p>	<p>1</p> <p>1</p>				
<p>3. Which symbol goes in the box <math>&gt;</math>, <math>&lt;</math> or <math>=</math>?</p> <p style="text-align: center;"><math>0.35 \times 1000</math> <input style="width: 30px; height: 20px;" type="text"/> <math>720 \div 2</math></p>	<p>4. Fill in the box</p> <p style="text-align: center;"><math>7.54 +</math> <input style="width: 30px; height: 20px;" type="text"/> <math>= 7.72</math></p>	<p>1</p> <p>1</p>				
<p>5. Work out <math>16.4 \div 20</math></p> <p style="text-align: right;">_____</p>	<p>6. Work out <math>6.67 + 5.93</math></p> <p style="text-align: right;">_____</p>	<p>1</p> <p>1</p>				
<p>7. Circle the two calculations which have the same value</p> <table style="width: 100%; text-align: center;"> <tr> <td><math>6.2 \times 2</math></td> <td><math>60 \times 0.2</math></td> </tr> <tr> <td><math>7 \div 0.5</math></td> <td><math>124 \div 10</math></td> </tr> </table>		$6.2 \times 2$	$60 \times 0.2$	$7 \div 0.5$	$124 \div 10$	<p>1</p>
$6.2 \times 2$	$60 \times 0.2$					
$7 \div 0.5$	$124 \div 10$					
<p>8. Which number is halfway between 4.5 and 10.3?</p> <p style="text-align: right;">_____</p>		<p>1</p>				
<p>9. £51.20 is shared between 8 people. How much does each receive?</p> <p style="text-align: right;">£ _____</p>		<p>1</p>				
<p>10. A rectangle has a perimeter of 12.8 cm. The length is 3.6 cm. What is the width?</p> <p style="text-align: right;">_____ cm</p>		<p>1</p>				

PLEASE TURN OVER

**Section D**Do not  
write in  
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marginIn this section, write down the number that ***n*** stands for.

1. <b><i>n</i></b> is the number of grams in 8.2 kg	<b><i>n</i></b> = _____	1
2. <b><i>n</i></b> is the number of seconds in two and a half minutes	<b><i>n</i></b> = _____	1
3. <b><i>n</i></b> is the number where $4 \times n = 36 \div 3$	<b><i>n</i></b> = _____	1
4. <b><i>n</i></b> is the next number in the sequence 22    18    14    10    6    2	<b><i>n</i></b> = _____	1
5. <b><i>n</i></b> is the area of a square with a side of length 5 cm	<b><i>n</i></b> = _____ cm <sup>2</sup>	1
6. <b><i>n</i></b> is the units digit when 547 is multiplied by 479	<b><i>n</i></b> = _____	1
7. <b><i>n</i></b> is the number where $n \times 5 = 4 \cdot 5$	<b><i>n</i></b> = _____	1
8. <b><i>n</i></b> is the value of $7^2 - 6^2$	<b><i>n</i></b> = _____	1
9. <b><i>n</i></b> is the sum of the odd factors of 24	<b><i>n</i></b> = _____	1
10. <b><i>n</i></b> is the smallest multiple of 13 more than 50	<b><i>n</i></b> = _____	1

**Section E**

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1. Simplify the following ratios as much as possible.  
Your answers should not include fractions or decimals.

(a)  $5 : 10 =$  \_\_\_\_\_

(b)  $24 : 15 =$  \_\_\_\_\_

(c) 20 minutes : 1 hour = \_\_\_\_\_

(d)  $2\frac{1}{3} : 4 =$  \_\_\_\_\_

1  
1  
1  
1

2. Aria is making gingerbread biscuits.

<b>Ingredients (makes 20)</b>	
350g	<i>plain flour</i>
120g	<i>butter</i>
175g	<i>brown sugar</i>
60ml	<i>golden syrup</i>

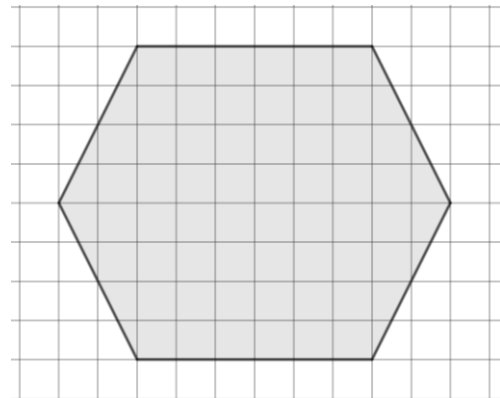
(a) How much flour is needed to make 4 biscuits?  
\_\_\_\_\_g

(b) How much butter is needed for 15 biscuits?  
\_\_\_\_\_g

(c) Aria uses 69 ml of golden syrup.  
How many biscuits can she make?  
\_\_\_\_\_

1  
1  
1

3. Draw all the lines of symmetry on the hexagon.

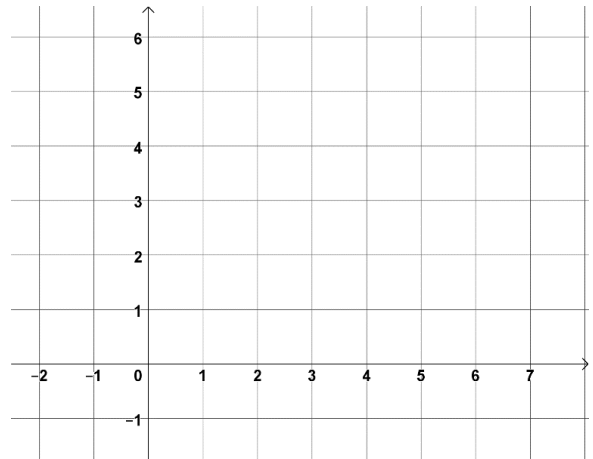


1

4. (a) Plot the points (-1, 5) and (5, 1) and draw a line between them.

(b) Write down the coordinate of the midpoint of the line AB

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