

Name _____

Examination Number _____

Room Number _____

WITHINGTON GIRLS' SCHOOL

ENTRANCE EXAMINATION 2014

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	

Section A

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write in
this
margin

1. Work out $342 + 576$ _____	2. Work out $478 - 189$ _____	1 1
3. Work out 43×16 _____	4. Work out $208 \div 8$ _____	1 1
5. Round 3172 to the nearest 100 _____	6. Work out $36 + 17 + 18 + 24 + 33$ _____	1 1
7. Write down the next number in this sequence 7, 14, 28, 56,..... _____		1
8. How many complete 6 cm pieces can be cut from a 2 metre stick? _____		1
9. What number goes in the box? <div style="display: flex; align-items: center; justify-content: center;"><div style="border: 1px solid black; width: 30px; height: 30px; margin-right: 5px;"></div>$\times 15 = 11 \times 14 + 26$</div> _____		1
10. It costs 14 pence a minute to ring Paris. How much will a phone call to Paris cost which starts at 13:52 and finishes at 14:05? <div style="text-align: right;">£ _____</div>		1

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 $2\frac{4}{5} + \frac{3}{10}$ _____	2. Work out $4\frac{1}{4} - 2\frac{3}{4}$ _____	1 1
3. Write $\frac{25}{7}$ as a mixed number _____	4. Work out $\frac{3}{8}$ of 32 _____	1 1
5. What is 30% of 250 _____	6. Work out $5 \div \frac{1}{4}$ _____	1 1
7. Circle the biggest fraction $\frac{5}{6}$ $\frac{19}{24}$ $\frac{3}{4}$		1
8. Pauline has £32, she gives $\frac{1}{4}$ of the money to Lizzie and £10 to Emma. What fraction of the £32 does Pauline have left? _____		1
9. Sue, Sarah and Ian share some sweets in the ratio 2:3:5. If Sarah received 12 sweets how many sweets were there in total? _____		1
10. What is a quarter of $\frac{2}{3}$? _____		1

PLEASE TURN OVER

Section C

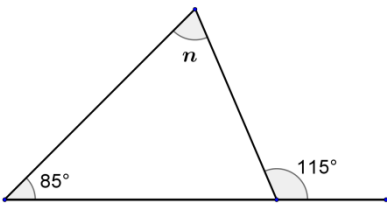
Do not write in this margin

<p>1. Work out $12.3 + 4.9$</p> <p style="text-align: right;">_____</p>	<p>2. Work out 4.8×5</p> <p style="text-align: right;">_____</p>	<p>1</p> <p>1</p>
<p>3. Write 0.35 as a fraction in its simplest form</p> <p style="text-align: right;">_____</p>	<p>4. Circle the larger number.</p> <p style="text-align: center;">$\frac{8}{100}$ or 0.7</p>	<p>1</p> <p>1</p>
<p>5. Work out 24.4×1000</p> <p style="text-align: right;">_____</p>	<p>6. Increase 9.32 by $\frac{1}{10}$</p> <p style="text-align: right;">_____</p>	<p>1</p> <p>1</p>
<p>7. What number goes in the box?</p> <p style="text-align: center;">$7.53 + \square = 7.73$</p>		<p>1</p>
<p>8. Pavan bought a sandwich for £2.35, a drink for 78 pence and a packet of crisps for 65 pence. How much change will he have from a £5 note?</p> <p style="text-align: right;">£ _____</p>		<p>1</p>
<p>9. Work out the value indicated by the arrow</p> <p style="text-align: center;"> $\begin{array}{ccccccc} 3 & & & & & & 4 \\ & & & & & & \\ \hline & & & & \downarrow & & \end{array}$ </p> <p style="text-align: right;">_____</p>		<p>1</p>
<p>10. Write the numbers in order of size, smallest first</p> <p style="text-align: center;">0.462 0.6 0.52 0.501</p> <p style="text-align: center;">_____</p>		<p>1</p>
		<p style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto;"></p>

Section D

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In this section, write down the number that n stands for.

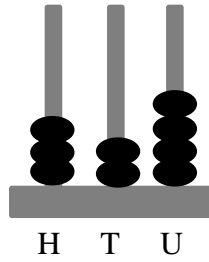
1. n is the number of centimetres in 2.1 metres	$n = \underline{\hspace{2cm}}$	1
2. n is the number where $3 \times n + 6 = 306$	$n = \underline{\hspace{2cm}}$	1
3. n is the input for this machine $n \rightarrow \boxed{\times 8} \rightarrow \boxed{+ 68} \rightarrow 100$	$n = \underline{\hspace{2cm}}$	1
4. n is the next number in the sequence 32, 28, 24, 20,	$n = \underline{\hspace{2cm}}$	1
5. n is the number in the middle of $2 \cdot 6$ and $4 \cdot 2$	$n = \underline{\hspace{2cm}}$	1
6. n is 15% of 200	$n = \underline{\hspace{2cm}}$	
7. n is the number where $\frac{8}{9} = \frac{24}{n}$	$n = \underline{\hspace{2cm}}$	1
8. n is the number of minutes between 6.15 am and 8.07 am	$n = \underline{\hspace{2cm}}$	1
9. n is the size of the angle in the triangle.		$n = \underline{\hspace{2cm}}$ 0
10. n is the value of $2^2 \times 3^2 \times 5$	$n = \underline{\hspace{2cm}}$	1

PLEASE TURN OVER

Section E

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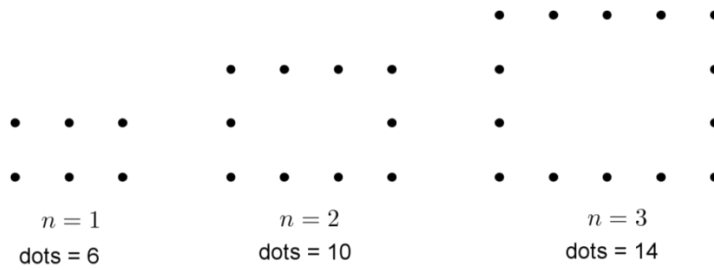
1. This diagram shows a simple abacus with nine beads representing the number 324



If there are 22 beads and all must be used, what is the largest 3 digit number that can be represented?

_____ 1

2.



(a) When $n = 5$, how many dots would be in the diagram?

_____ 1

(b) One diagram has 54 dots, what is the pattern number, n ?

_____ 1

- 3.
- Think of a number
 - Add 3
 - Multiply by 2
 - Take away 2
 - Add 10
 - Divide by 2
 - Take away the number you started with
 - Write down the number that is left?

_____ 1

4 Complete the following calculations by filling in the missing single digit numbers

$$\begin{array}{r}
 2 \quad 0 \quad 7 \quad 3 \\
 1 \quad \square \quad 6 \quad 2 \\
 + \quad 4 \quad 5 \quad \square \quad 2 \\
 \hline
 8 \quad 2 \quad 1 \quad 7
 \end{array}$$

1

5. Vani is shopping for yoghurts.
The table below show the price of yoghurts at Tesco and Sainbury's

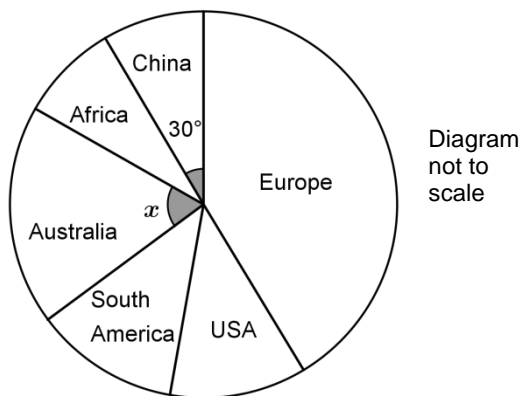
	Price for one yoghurt	Offer
Tesco	75 pence	5 for £3
Sainbury's	80 pence	4 for £2

Vani wants to buy 7 yoghurts.
Which shop would be cheaper for 7 yoghurts and what is the difference in the price?

Shop _____ 1

Difference _____ pence 1

6. There are 72 girls in Year 8. The pie chart shows where they went on holiday in the summer of 2013.



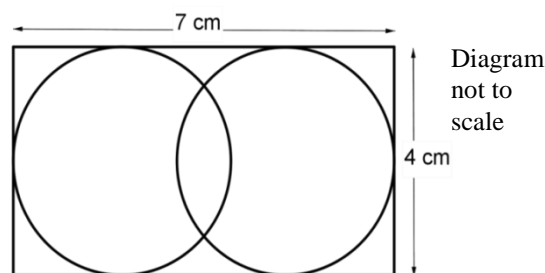
(a) How many girls visited China?

_____ 1

(b) 10 girls visited Australia. What is the size of the angle x in degrees?

_____ 1

7. The diagram shows two circles enclosed in a rectangle measuring 7cm by 4cm. What is the distance between the two centres of the circles?



_____ cm 1