

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

Examination Number: \_\_\_\_\_

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

# WITHINGTON GIRLS' SCHOOL

## ENTRANCE EXAMINATION 2013

### 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		

Do not  
write  
in this  
margin

**Section A**

1. Work out  $583 + 658$

Answer: \_\_\_\_\_

2. Work out  $345 - 167$

Answer: \_\_\_\_\_

1

1

3. Work out  $36 \times 24$

Answer: \_\_\_\_\_

4. Work out  $392 \div 7$

Answer: \_\_\_\_\_

1

1

5. Work out  $63 \cdot 2 \div 200$

Answer: \_\_\_\_\_

6. Work out  $44 + 12 + 13 + 37 + 26$

Answer: \_\_\_\_\_

1

1

7. Write down the next two numbers in this sequence

19, 15, 11, 7, ...

Answer: \_\_\_\_\_ and \_\_\_\_\_

1

8. Laura's rabbit eats 14 carrots each week. How many carrots would Laura need to buy to feed her rabbit for 30 weeks?

Answer: \_\_\_\_\_

1

9. In the space below write these numbers in order, from smallest to largest:

6   - 2   4   - 8   3   - 5

1

10. Manchester Arena can seat 17 643 people.  
Round this number to the nearest 1000.

Answer: \_\_\_\_\_

1



**Section B**

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  $2\frac{2}{3} + \frac{2}{3}$

Answer: \_\_\_\_\_

2. Work out  $8\frac{1}{2} - 1\frac{3}{4}$

Answer: \_\_\_\_\_

1

1

3. Write  $\frac{24}{56}$  in its simplest form

Answer: \_\_\_\_\_

4. Work out  $\frac{4}{7}$  of 63

Answer: \_\_\_\_\_

1

1

5. What is  $5\frac{3}{4} \div \frac{1}{4}$ ?

Answer: \_\_\_\_\_

1

6. In the space below write the following numbers from smallest to largest:

$\frac{3}{4}$

0.705

0.755

$\frac{4}{5}$

0.7505

1

7. 20% of the girls in class 7W wear glasses. There are 25 girls in the class. How many of them wear glasses?

Answer: \_\_\_\_\_

1

8. A jug contains 750 ml of orange juice. Rebekah drank  $\frac{1}{5}$  of the juice, Abigail drank 200 ml and Anna drank 120 ml. How much juice is left in the jug?

Answer: \_\_\_\_\_ ml

1

9. Nell and Joe shared some sweets in the ratio 4:5. Nell received 24 sweets. How many sweets were there altogether?

Answer: \_\_\_\_\_

1

10. What is  $200 \times \frac{7}{1000}$ ?

Answer: \_\_\_\_\_

1

**Section C**

1. How many centimetres are there in 212.4 metres?

Answer: \_\_\_\_\_ cm

1

2. Which number is halfway between 2.6 and 4.8?

Answer: \_\_\_\_\_

1

3. Work out  $8.3 + 17.8$ .

Answer: \_\_\_\_\_

1

4. I can write 70 as the product of three prime numbers:  $70 = 2 \times 5 \times 7$   
Write 110 as the product of three prime numbers.

Answer:  $110 = \underline{\quad} \times \underline{\quad} \times \underline{\quad}$

1

5. Work out  $30 \times 21.4$ .

Answer: \_\_\_\_\_

1

6. A rectangular garden is 16.8 metres long and 11.2 metres wide. Calculate its perimeter.

Answer: \_\_\_\_\_ m

1

7. A television programme starts at 19:35 and finishes at 22:10. How long does it last in hours and minutes?

Answer: \_\_\_\_\_ hours \_\_\_\_\_ minutes

1

8. The temperature at midnight on Friday was  $-5^{\circ}\text{C}$  and at midday on Saturday was  $17^{\circ}\text{C}$ . What was the overall temperature change?

Answer: \_\_\_\_\_  $^{\circ}\text{C}$

1

9. What is the smallest number which is a multiple of 12 and 15?

Answer: \_\_\_\_\_

1

10. Party poppers are sold in bags of 12. Anna and Alfred bought just enough bags of poppers so that all 153 guests at their birthday party could have one. How many poppers were left in the last bag?

Answer: \_\_\_\_\_

1

**Section D**For each of these statements write down the number that ***n*** stands for.1. ***n*** is the number of millilitres in 2.5 litres.

Answer: \_\_\_\_\_ ml

1

2. ***n*** is the answer to  $525 \div 25$ .

Answer: \_\_\_\_\_

1

3. ***n*** is the number for which  $2 \times n + 5 = 10$ .

Answer: \_\_\_\_\_

1

4. ***n*** is the length of a rectangle, with a width of 6 cm and a perimeter of 30 cm.

Answer: \_\_\_\_\_ cm

1

5. ***n*** is the answer to  $5 \times 4^2$ .

Answer: \_\_\_\_\_

1

6. ***n*** is the area of a square with a perimeter of 36 cm.Answer: \_\_\_\_\_ cm<sup>2</sup>

1

7. ***n*** is the next number in this sequence:

18, -16, 19, -15, 20, ...

Answer: \_\_\_\_\_

1

8. ***n*** is the number for which  $32 \div n = n \div 2$ .

Answer: \_\_\_\_\_

1

9. ***n*** is the number for which  $2 \times n \times 7 = 42$ .

Answer: \_\_\_\_\_

1

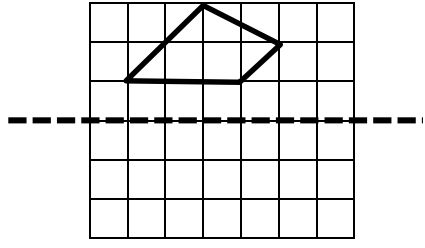
10. ***n*** is the number half way between  $\frac{1}{2}$  and 4.

Answer: \_\_\_\_\_

1

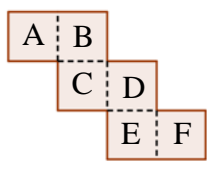
**Section E**

1. Complete the shape so that the broken line is a line of symmetry.



1

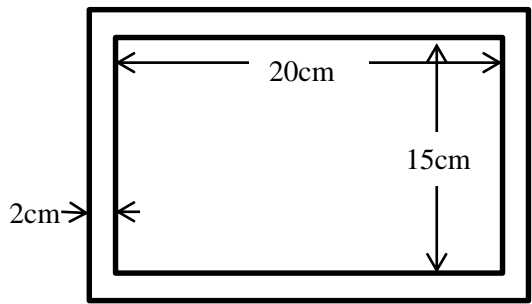
2. When the net shown is folded into a cube, which face would be on the opposite side of the cube to face A?



1

Answer: \_\_\_\_\_

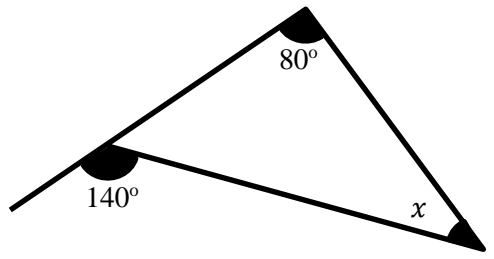
3. The diagram shows a picture that has been framed. If the picture measures 20 cm by 15 cm and the width of the frame is 2 cm. Find the perimeter of the outside edge of the frame.



1

Answer: \_\_\_\_\_ cm

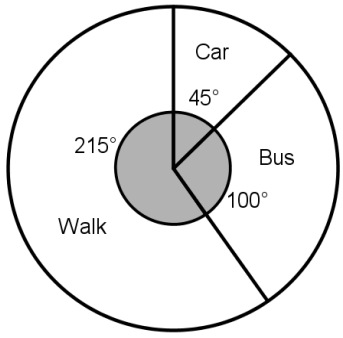
4. Work out the size of the angle marked  $x$  in this triangle.



1

Answer: \_\_\_\_\_ °

5.

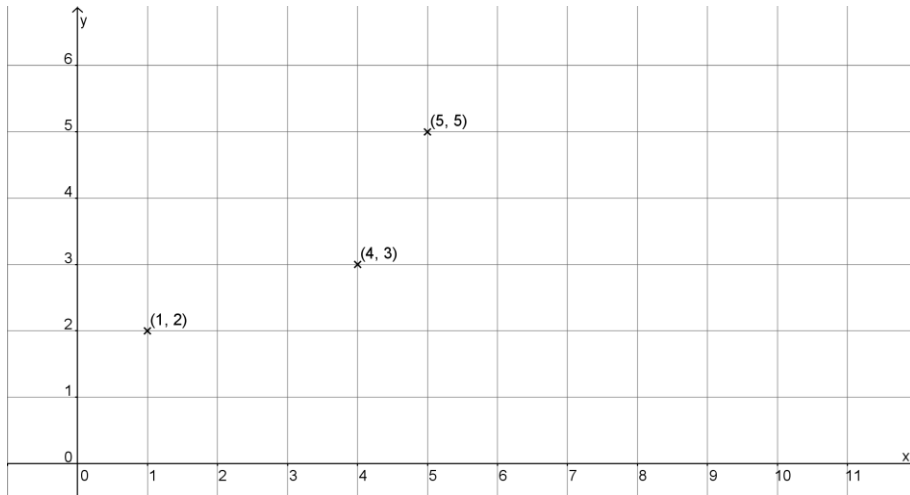


720 people were asked how they usually travel to school. The results are shown on the pie chart. How many people travel to school by car?

1

Answer: \_\_\_\_\_

6. I have plotted three points, (1, 2), (4, 3) and (5, 5) which are three corners of a parallelogram. Write down the coordinates of 2 possible positions for the fourth corner of the parallelogram.



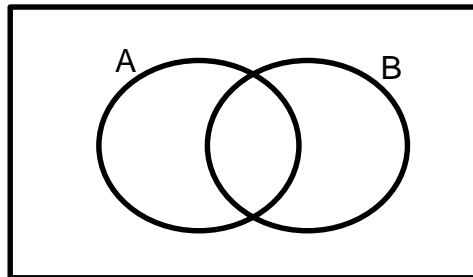
( \_\_\_\_\_, \_\_\_\_\_ )

1

( \_\_\_\_\_, \_\_\_\_\_ )

1

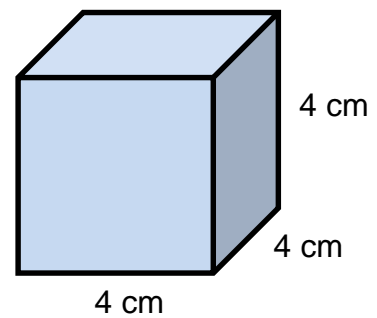
7. Set A = multiples of 2  
 Set B = multiples of 3  
 Add the numbers 7 and 15 to the Venn diagram.



1

1

8. I have some 1 cm cubes made out of wood which I have used to build the cube shown opposite. How many 1 cm cubes cannot be seen from the outside?



Answer: \_\_\_\_\_

1