



KING'S COLLEGE SCHOOL  
WIMBLEDON

January 2016

Common Entrance Pre-Test  
Specimen paper

## MATHEMATICS

50 minutes

to complete **both** Section A **and** Section B

### SECTION B

You are advised to spend approximately 30 minutes on this section.

1. Do all your written work on this question paper.
2. Calculators must not be used.
3. Attempt all questions in Section B.

Surname:

.....

First names:

.....

## QUESTION 1

(i) Work out  $273 \times 23$ .

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

(ii) Work out  $595 \div 17$ .

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

(iii) Write down two multiples of 2001.

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

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

(iv) Write down two factors of 2001.

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

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

(v) Find the cost of 31 litres of petrol at 81p per litre.

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

(vi) In a 'third off' sale a bike is sold for £114.  
How much would it have sold for before the sale?

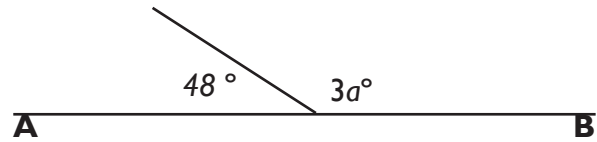
Answer: \_\_\_\_\_

## QUESTION 2

- (i) In 25 minutes, through what angle does the minute hand of a clock pass?

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

- (ii) In the diagram AB is a straight line.  
Calculate the value of angle  $a^\circ$ .



Answer:  $a^\circ =$  \_\_\_\_\_

- (iii) A square has a perimeter of 96cm.

- (a) Calculate the length of one side.

Answer: length = \_\_\_\_\_

- (b) Find the area of the square.

Answer: area = \_\_\_\_\_

- (c) Give a sketch, not to scale, of a rectangle, showing the length of its sides, which has the same area as the square.

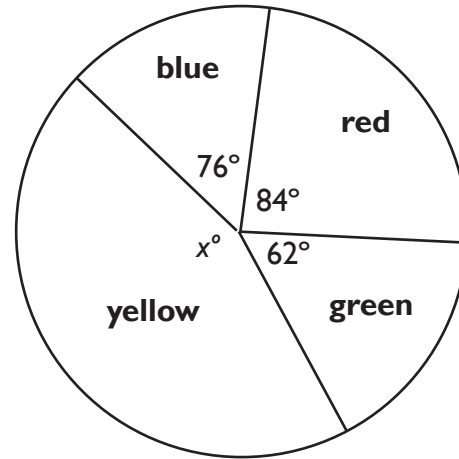
Answer: length = \_\_\_\_\_

- (d) Find the perimeter of your rectangle.

Answer: perimeter = \_\_\_\_\_

### QUESTION 3

The pie chart shows the favourite colour of some boys.



- (a) Calculate the value of  $x$ .

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

Red is the favourite colour of 126 boys.

- (b) Calculate the number of boys whose favourite colour is:

- (i) green.

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

- (ii) yellow.

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

- (iii) not blue.

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

- (c) Calculate the total number of boys.

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

## QUESTION 4

Here is a pattern of numbers.

$$\text{Row 1: } 1 + 2^2 = 5$$

$$\text{Row 2: } 2 + 3^2 = 11$$

$$\text{Row 3: } 3 + 4^2 = 19$$

- (a) Write out the next two rows.

Answer: Row 4:

Answer: Row 5:

- (b) Write out Row 9.

Answer: Row 9:

- (c) Write out Row 49.

Answer: Row 49:

- (d) Find the row which ends 419.

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

- (e) What is the general rule to describe each row if you call the row number  $n$  ?

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

**NOW GO BACK AND CHECK YOUR WORK**