



MATHEMATICS SCHOLARSHIP EXAM YEAR 7 ENTRY SAMPLE PAPER

Time allowed: 30 minutes

INSTRUCTIONS TO CANDIDATES

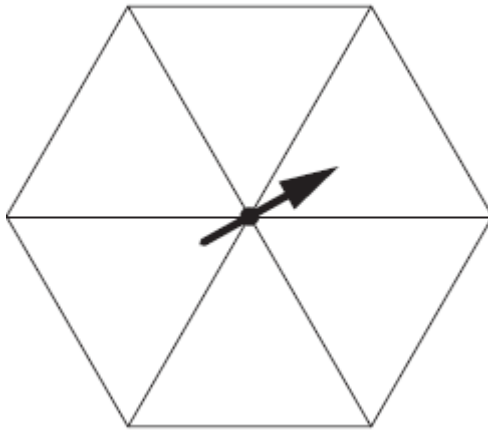
- Write your name in the space provided
- Calculators are **not** permitted
- Always make your method clear and show your working
- Answer all questions
- Show units where applicable

CANDIDATE NAME:

SCORE:

Q1.Here is a spinner.

Write a whole number in each section of the spinner so that it is **certain** you will get a number less than 4 and it is **impossible** you will get an even number.



1 mark

Q2. Calculate $816 \div 24$



Show
your
working

2 marks

Q3. Circle the **two** prime numbers.



29

39

49

59

69

1 mark

Q4. Ben thinks of a number.



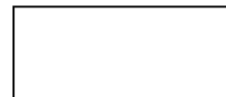
He adds half of the number to a quarter of the number.

The result is 60

What was the number Ben first thought of?

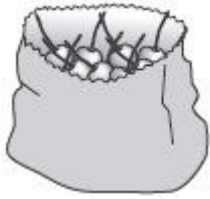


Show
your **working**.
You may get
a mark



2 marks

Q5. Sarah had a bag of cherries.



She ate 5 cherries, then gave half of what she had left to Liam.

Liam ate 5 of his cherries, then gave half of what he had left to Amy.

Amy got 2 cherries.

How many cherries did Sarah have in her bag at the start?

Show
your **working**.
You may get
a mark

2 marks

Q6. Here is a number chart.

Every third number in the chart has a circle on it.

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22			

The chart continues in the same way.

Here is another row in the chart.

Draw the missing circles.

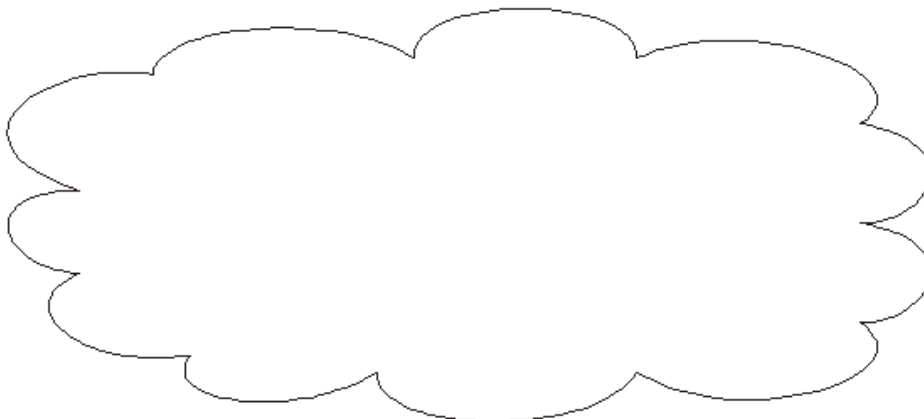
71	72	73	74	75
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1 mark

Will the number **1003** have a circle on it?
Circle **Yes** or **No**.

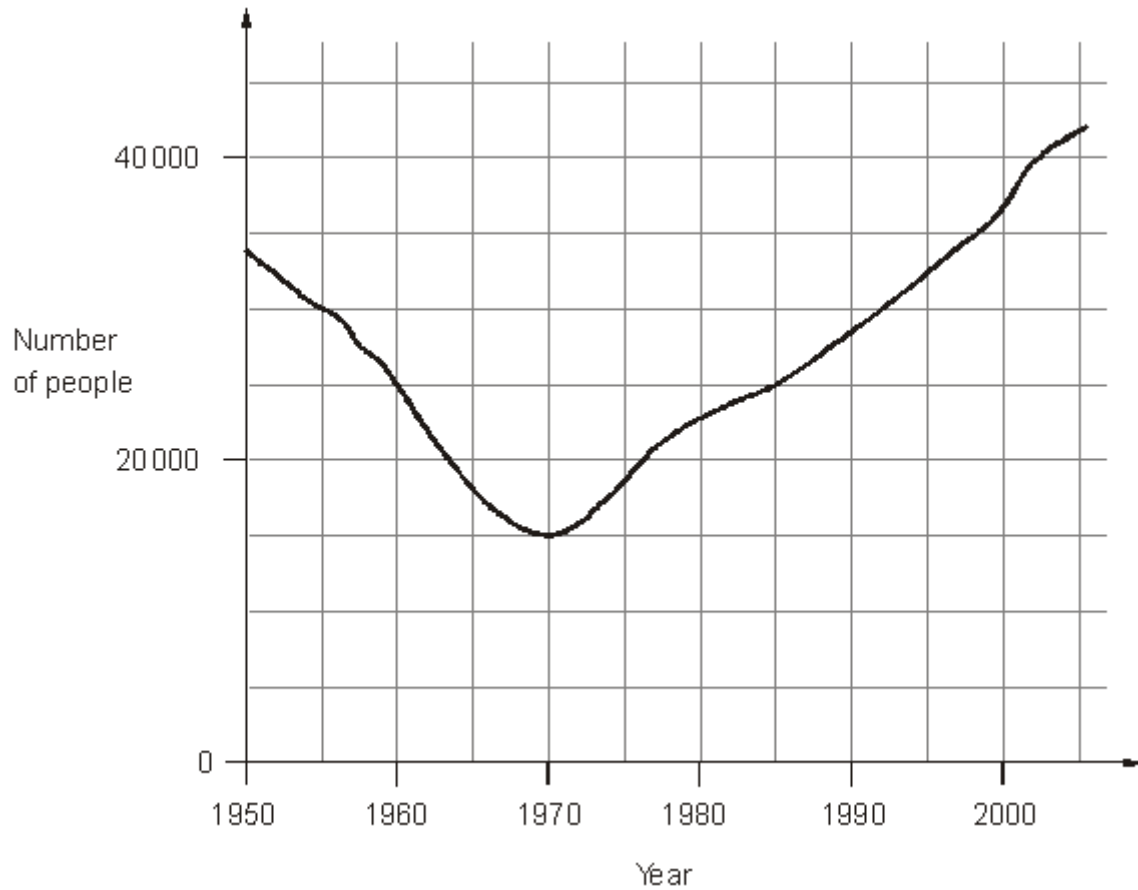
 Yes / No

Explain how you know.



1 mark

Q7. This graph shows the number of people living in a town.



Look at the graph.

How many people lived in the town in 1985?

1 mark

In which year was the number of people the same as in 1950?

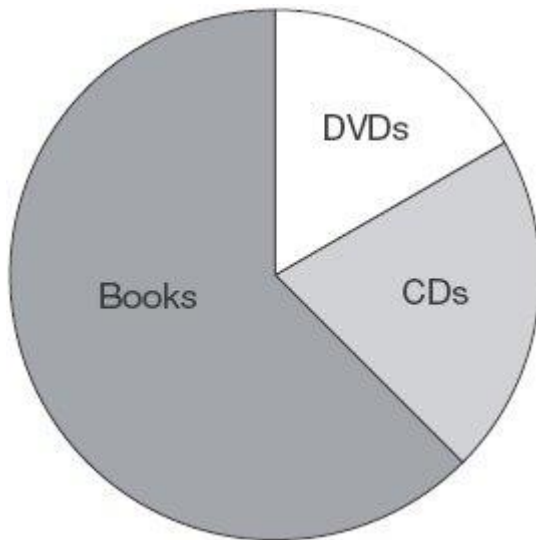
1 mark

Find the year when the number of people first went below 20 000

1 mark

Q8. A shop sells books, CDs and DVDs.

This pie chart shows the sales of each in one week.



Estimate the **fraction** of the total sales that were DVDs.

$\frac{2}{10}$	
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1 mark

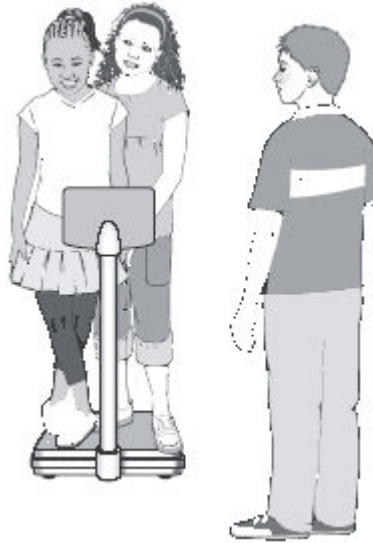
In this week, 200 **CDs** were sold.

Estimate how many books were sold.

$\frac{6}{2}$	
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1 mark

- Q9.** Sarah, Amy and Liam stand on some weighing scales two at a time.



Here are the measurements:

Sarah and Amy **70kg**

Sarah and Liam **80kg**

Liam and Amy **80kg**

How much does Liam weigh?



Show
your **working**.
You may get
a mark 

 kg

2 marks

Q10. Here is a recipe for fruit smoothies.

Recipe

10 strawberries
 $\frac{1}{2}$ litre of orange juice
 250ml yogurt
 1 banana

Makes two smoothies



Stefan uses the recipe to make smoothies.
 He uses 1 litre of yogurt.

How many strawberries does he use?

1 mark

Amir uses the same recipe.

He wants to make 5 smoothies.
 He has 1 litre of orange juice.

How many **more** millilitres of orange juice does he need?



Show
your **method**.
You may get
a mark.

ml

2 marks

Q11. 20% of Megan's number is **64**.

What is **50%** of Megan's number?



Show
your
working

2 marks

Q12. Write these in order of size, starting with the smallest.

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

0.5

$$\frac{3}{5}$$

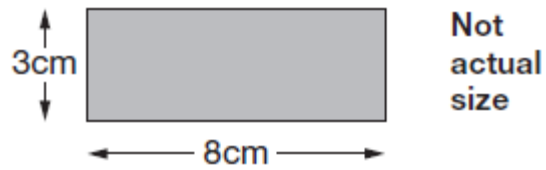
0.65



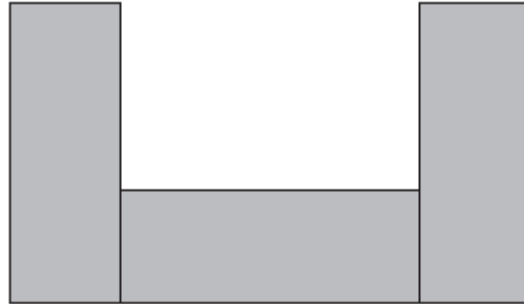
smallest

2 marks

Q13. Alfie has some rectangles.



He makes this shape using three of the rectangles.



What is the **perimeter** of Alfie's shape?



Show
your
method

cm

2 marks

Q14. Here are three equations.

$$a + b + c = 30$$

$$a + b = 24$$

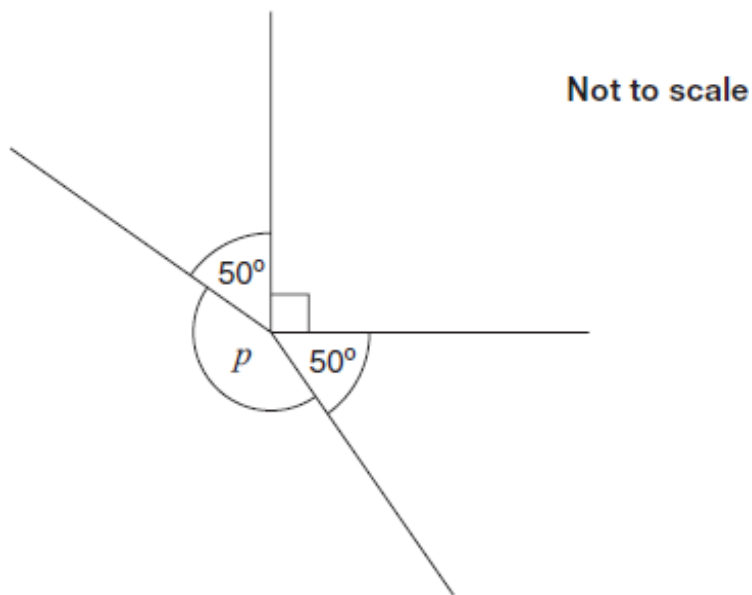
$$b + c = 14$$

What are the values of a , b and c ?



$a =$
 $b =$
 $c =$

2 marks

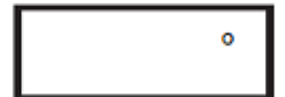
Q15.

Calculate the size of angle p in the diagram.

Do **not** use a protractor (angle measurer).



Show
your
method



2 marks

END OF PAPER