

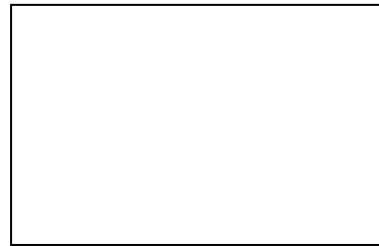


UNITED KINGDOM MATHEMATICS TRUST

RELAY ROUND

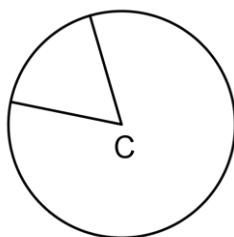
- Time allowed: 40 minutes.
- Teams will work in pairs, in separate parts of the room.
- There are 30 questions in total, 15 for Pair A and 15 for Pair B.
- *Two* marks are awarded for every correct answer. Pairs will have two chances to answer each question and there is no penalty for giving a correct answer at the second attempt. A question is marked either correct or incorrect and no partial marks are awarded.

A1 In a year in which 1st April is on a Sunday what day is 1st June?

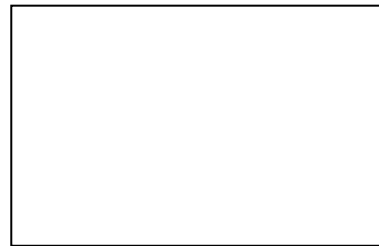


B8 A circle is divided into 8 equal sectors.
What is the angle of one of the eight equal sectors at the centre, C, of the circle?

(Diagram not drawn to scale)



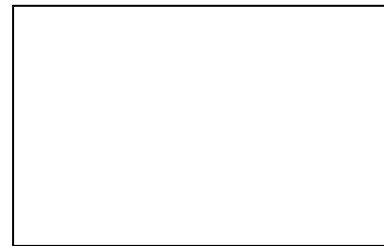
B1 How many seconds are there in 3 hours?



A9 John wants a computer game now! It costs £25.50 and he has only saved £5.90. His mum offers to give him the rest, but she insists he pays her back at £1.40 a week. How long will it take him to pay back all the money that he owes his mum?



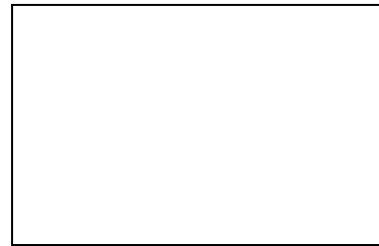
A2 My granny saves two pence pieces in a jar. When I went to see her, she said she had £13.48. How many two pence pieces make this total?



B9 Fred is facing NE. In which direction will he be facing if he turns clockwise through 2 right angles?



B2 The wooden book shelves have fixed ends. For the books to stay upright on each shelf, a divider is needed every eight books. There are 3 dividers on each shelf and 20 shelves. The shelves are all full. How many books are there?

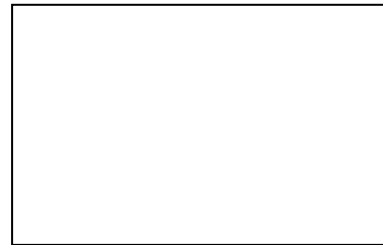


A10 Harry spent $\frac{3}{5}$ of his money on sweets and 30% on ice creams. What fraction of his money is left?



A3 In 2012 the population of a small town in New Zealand is 8968. In four years time it will double and then in another four years it will double again.

What will be the population in 2020?



B10 How many 250 millilitre glasses can be filled from a 2.5 litre jug?



B3 Auntie Betty is saving all her five pence pieces in a jar. The total money Auntie Betty has is £18.55.

How many coins are there in the jar?

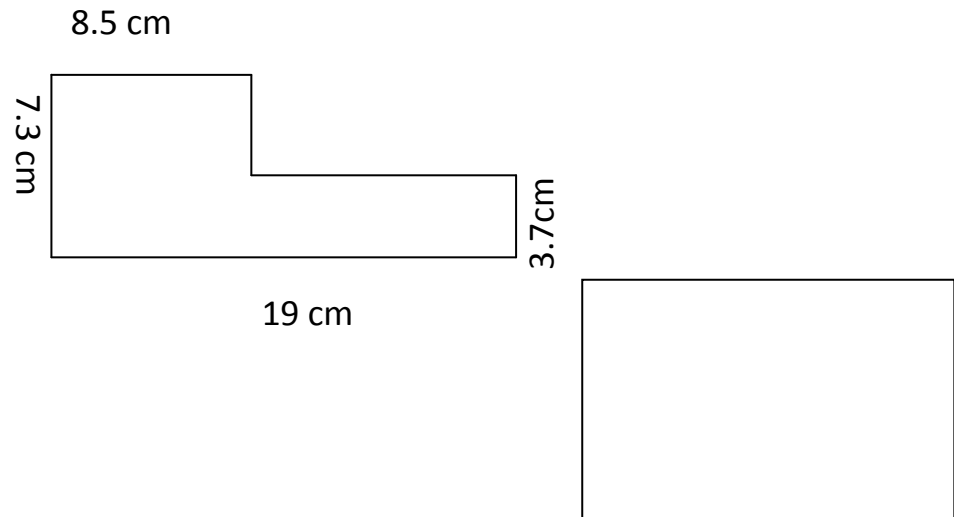


A11 Our local youth group went sailing while on the annual camp holiday. The sail boats had different three digit number between 100 and 999 on their sails. Our group leader noticed that these numbers were all the square numbers which end with the digit '1'. How many boats were being used by our youth group?



A4 What is the perimeter of the shape?


(Diagram not drawn to scale)



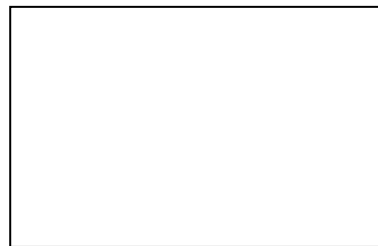
B11 Jane and Ann went shopping and Ann spent £8.45 more than Jane. Altogether they spent £25.35. How much did Jane spend?



B4 Integer Hall and Gardens will only be open to the public on dates that are square numbers, for example, on the 4th of each month. In one year how many days will Integer Hall and Gardens be open?



A12 At the end of running the local marathon my watch said I finished at 16:22. I took 3 hours 45 minutes to complete the marathon. What time did my watch say I started the marathon?

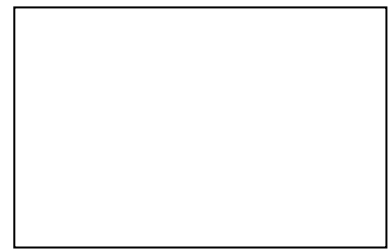
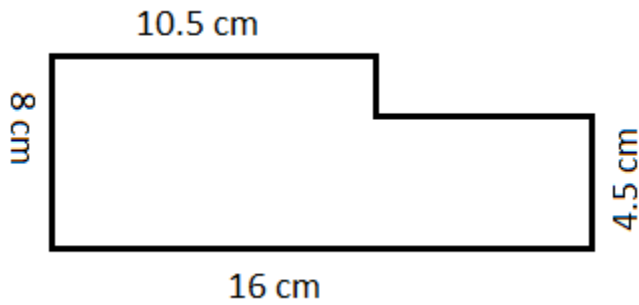


A5 The school shop bought pencils in boxes of 250 for £12.50. The shop wants to make a profit of 9p per pencil. How much should they sell each pencil for?



B12 Each member of the class agreed to give 1p to charity on Monday and then to double the amount given the previous day finishing on the Friday of that week. The teacher added 50p on each of the five days. How much did the class of 30 give to charity that week?

B5 What is the perimeter of this shape?



A13 I set off with a twenty pound note and buy a magazine that costs £5.95, some sweets that cost £4.50 and a new pen. I am given £4.25 change. How much is the pen?



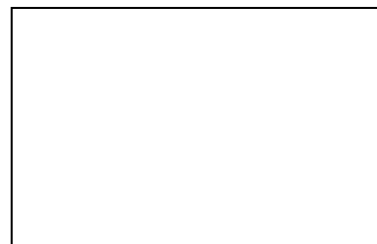
A6 A child is walking at an average speed of 4 km/h.

How long will it take him to walk 10km?

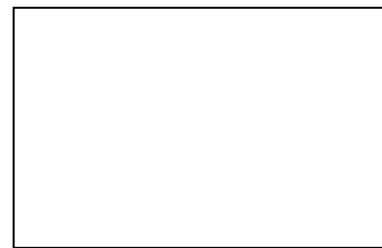


B13 Tanya has just added up all the numbers in her junior Sudoku. The junior Sudoku has only the numbers one to six in each section and only six sections. The diagram shows an example of one section. What total did Tanya get?

1	2	6
3	5	4



B6 In the long distance run two brothers, Tom and John were racing against each other. Tom did the distance in 76.1 minutes and John took 111.53 minutes. How many minutes did Tom finish ahead of John?

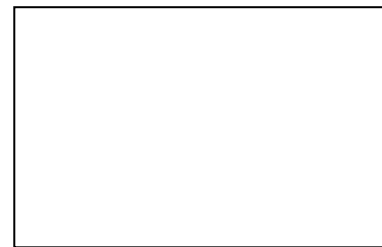
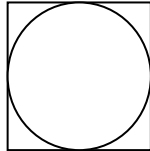


A14 How many minutes are there in one day?



A7 The circle has a radius of 3.5cm. What is the area of the smallest square into which the circle can be fitted?

(Diagram not drawn to scale)



B14 Every week granny puts her change into a pot. At the end of the month she spills it out onto the table and counts up how much she has saved. Last month she had 23 two pence coins, 14 pennies and eight 5p pieces. How much has she saved?



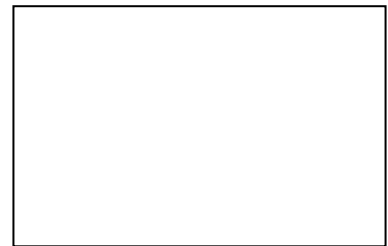
B7 Six children each had an equal share of a sum of money. They each received £3.18 and there was 2p left over. How much was the sum of money?



A15 My talking book CDs were between 60 and 65 minutes long. There are ten CDs for one story. What is the difference between the shortest and longest the story could take?



A8 A right-angled triangle has an angle of 55° . What is the smallest angle in the triangle?



B15 The number 45 bus passes my house every twenty-two minutes starting at 06:00. If I look out for a bus at 10 am, how long do I wait before a bus passes?

(Assume the buses are always on time!)

