Christmas Mental Maths
Challenge Cards

Christmas Mental Maths

1. Solve these problems in your head.

a) If a rectangular Christmas card envelope measures 7cm on one side and 9cm on another side, what is the total area of 2 envelopes?

b) 3 presents cost £5.99, £7.99 and 9.99. What is the total cost of the three presents?

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2. Solve these problems in your head.

a) Dave is making mince pies. Which of these amounts is closest to 100g of flour?

99.99g, 100.10g, 99.90g, 100.02g

b) The world record for the biggest gathering of Santas took place on 27th December 2014 in Kerala, India. Eighteen thousand and twelve people dressed up as Father Christmas. Write this number in figures.

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3. Solve these problems in your head.

a) The restaurant bill for the family pre-Christmas meal comes to £148.88. They need to divide it by four. What do they pay each?

b) In a cafe the family of six all ordered a Christmas hot chocolate costing £3.50 per person. What was the total cost for all six people?

4. Solve these problems in your head.

a) One serving of Christmas pudding has 350 calories. How many calories in four portions?

b) How many calories in eight portions?

5. Solve these problems in your head.

a) Andy's Christmas chocolate bar is cuboid shape. How many faces and vertices does it have?

b) Jane's special Christmas tree chocolate is cone shaped and comes in packets of three. How many faces and vertices does the whole packet have?

6. Solve these problems in your head.

a) A shop buys in bags of chocolate coins for 23p each. How much does the shop pay for a box of 100 bags?

b) The same shop buys Christmas candy canes in boxes of 100 for £27. How much do they cost each and how much profit would the shop make on each one if it sold them for 50p each?

7. Solve these problems in your head.

a) At the end of an old Christmas programme, the credits show the year in Roman numerals as

MCMXCV

What year was the programme made?

b) Now round your answer to the nearest millennium (1000 years) and give your answer in Roman numerals.

8. Solve these problems in your head.

a) A shop has sold 650 bags of chocolate coins out of the box of 1000. How many bags does it have left?

b) The bakery around the corner made 500 mince pies today and has sold 225 of them. How many does it have left?

9. Solve these problems in your head.

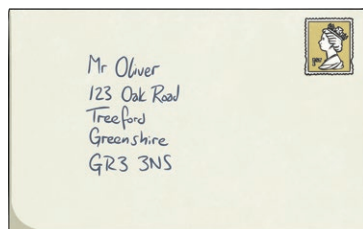a) Which numbers on an Advent calendar are multiples of six?

b) Which numbers on an Advent calendar are square numbers?

10. Solve these problems in your head.

a) It took the postman from 8:00am until 3:40pm to deliver yesterday's Christmas post. How long did it take?

b) The Christmas parcel delivery lady started her shift at 8:30am and finished at 5:00pm. How long was her shift?

Mr Oliver
123 Oak Road
Treeford
Greenshire
GR3 3NS

11. Solve these problems in your head.

a) Susan wants to eat the biggest piece of Christmas cake. Which fraction of cake should she choose?

$$\frac{1}{2} \quad \frac{1}{4} \quad \frac{6}{10} \quad \frac{3}{6}$$

b) Jack wants the smallest piece of cake. Which fraction of cake should he choose?

$$\frac{3}{4} \quad \frac{1}{5} \quad \frac{6}{8} \quad \frac{3}{6} \quad \frac{7}{10}$$

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12. Solve these problems in your head.

a) Adam baked 24 mince pies. He took half to Scouts, a quarter to school and kept the rest for his house. How many did he keep?

b) Sofia baked 100 mince pies. She took 50% to school for the Christmas fair, 20% to Brownies and kept the rest for her large family. How many did she keep?

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1. a) 126cm^2
   b) £23.97
2. a) 99.99g
   b) 18 012 people
3. a) £37.22
   b) £21.00
4. a) 1400 calories
   b) 2800 calories

5. a) 6 faces, 8 vertices
   b) 6 faces, 3 vertices
6. a) £23.00
   b) 23p (cost 27p each)
7. a) 1995
   b) MM (2000)
8. a) 350 bags left
   b) 275 pies left

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9. a) 6, 12, 18, 24
   b) 1, 4, 9, 16, (25)
10. a) 7 hours 40 minutes
    b) 8 hours 30 minutes
11. a) $\frac{6}{10}$
    b) $\frac{1}{5}$
12. a) 6 pies
    b) 30 pies