


17 I think of a number, double it, subtract 4 and then halve it. I end up with 8. What number did I start with?

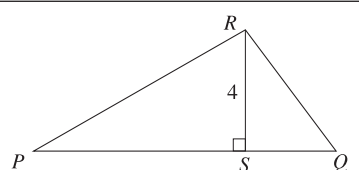
A 2 B 8 C 10 D 16 E 28

18 The table shows the results of a survey in which 60 boys and 60 girls were asked what colour of dress girls should wear. 

	blue	pink	black
girls	12	6	42
boys	15	24	21

What percentage of *boys* thought *girls* should wear pink?

A 5% B 10% C 20% D 40% E 100%

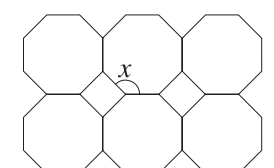
19 In the diagram (which is not to scale), the length of *RS* is 4cm and is twice the length of *SQ*. The length of *PS* is three times the length of *SQ*. What is the area of triangle *PQR*? 

A 12cm² B 16cm² C 24cm² D 30cm² E 32cm²

20 One of these numbers is a prime number. Which one is it?

A 2013 B 2014 C 2015 D 2016 E 2017

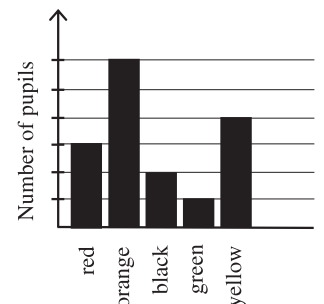
Q21 – 25 are not multiple-choice problems. Write your answers in the boxes.

21 The diagram shows regular octagons and squares. 

What is the size of angle *x*?

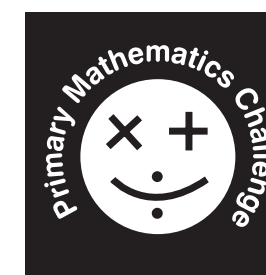
22 The first and third digits of the five-digit number ☺6☺41 are the same. The number is exactly divisible by 9. What digit does ☺ represent?

23 What is the value of $\frac{(3 + 7 + 10) \times (1000 - 8)}{992}$?

24 Pupils in Mrs Madir's class were asked about their favourite colour of jelly baby. The results are shown in this bar graph. Which *two* colours taken together are the favourites of exactly 50% of the class? 

25 In a family with 2 boys and 2 girls, the sum of the children's ages is 42. The 2 boys were born 2 years apart, and so were the girls. The younger boy is twice the age of the older girl. How old is the youngest child?

Primary Mathematics Challenge



19-23 November 2012

Name Class

Please do **NOT** start to answer questions until you are told to do so. When you do turn over the page you will have 45 minutes for the challenge.

You must do all the work on your own. You should use rough paper for this.

For questions 1 – 20, write down A B C D or E in the space for each answer.

For questions 21 – 25, write down your answer in the space.


Each correct answer gains one mark.

Good luck. Enjoy the challenge!

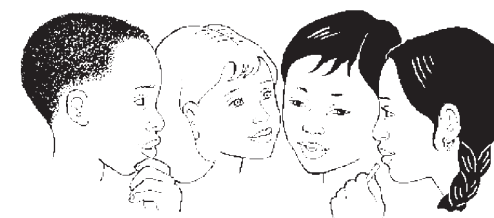
Practice Questions

P1 Add together one dozen and half a dozen.

A 3 B 6 C 12 D 18 E 24

P2 If a parrot learns five new words every fifteen minutes, how many new words will it learn in an hour? 

A 5 B 10 C 15 D 20 E 60

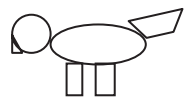


Total mark


/ 25



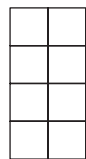
Primary Mathematics Challenge 2012

1 What is the name of the shape used to make the head of this bird? 


A circle B ellipse C rectangle D trapezium E triangle

2 Penny Lane School collected 5300 pennies for charity. How much is this worth? 

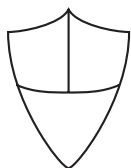
A 53p B £5.30 C £53 D £530 E £5300

3 Patti has started making a patio using square slabs (see the diagram), but she wants it to be twice as long and twice as wide. How many slabs will she need altogether? 

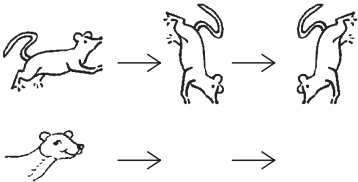
A 6 B 8 C 10 D 16 E 32






4 For one journey my bus fare has increased from £2.05 to £2.15. I travel this journey twice each day of the week from Monday to Friday. How much extra do I pay in one week? 


A 10p B 50p C £1 D £10.75 E £21.50

5 I must use three colours (red, white and blue) in the badge shown. How many different badges can I make with the three colours? 

A 3 B 4 C 5 D 6 E 9

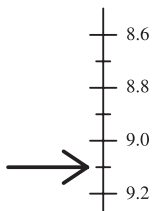
6 On the right, the mouse has been rotated and then reflected. Which of the following would show how the polecat would become if it were rotated and then reflected in the same way? 

A  B  C  D  E 

7 The diagrams show five patterns. How many of the five patterns have more than one line of symmetry? 

A 1 B 2 C 3 D 4 E 5

Primary Mathematics Challenge 2012

8 In *The Z Factor* (a mathematical talent show) a meter measures the amount of applause. What applause rating does the arrow show? 

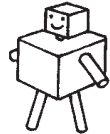
A 8.5 B 8.95 C 8.99 D 9.1 E 9.5

9 An equilateral triangle, a square, a regular pentagon and a regular hexagon each has a perimeter of 60cm. Which of these shapes has the largest side length?

A hexagon B pentagon C square D triangle E They are all the same

10 Suppose we live in a world in which children can have negative amounts of money in their purse. Dolores starts with £1, spends £1.30, and then finds 70p. How much will Dolores have now?


A -40p B 0p C 40p D 70p E £2.00

11 Hugh Boyd is making a cuboid out of centimetre cubes. It will measure 4cm × 3cm × 5cm when it is finished. So far Hugh has used 43 cubes. How many more cubes does he need to finish his cuboid? 

A 15 B 17 C 27 D 30 E 60

12 What is thirteen thousand added to thirteen hundred and thirteen?


A 13 113 B 13 413 C 14 313 D 131 313 E 1 301 313

13 My music teacher Miss Quaver was walking across the playground when a bird flew past. What word best describes the probability of her being hit on the head by bird poo? 

A impossible B very unlikely C evens D very likely E certain

14 Which of the following numbers is *not* a factor of 50?

A 5 B 10 C 15 D 25 E 50

15 Marcus Absent goes to school from Monday to Friday only if there is an 's' in the name of the day. During the 13 complete weeks of last term, how many days did he go to school? 

A 3 B 13 C 16 D 39 E 65

16 On a train journey we left Edinburgh at 10.30 and arrived at (King's Cross) London at 14.50. The train stopped only at Newcastle, Darlington and York, for 5 minutes each time. For how minutes was the train moving on this journey?

A 245 B 250 C 260 D 405 E 420