



Mathematics Challenge 2014

25th January 2014

YEAR 1

Model Answers

We provide these model answers of our CWN: Mathematics Challenge 2014 exam to help parents.

Please note that for some problems there are more than one possible answer.

Some questions are open ended.

We strongly advise all children to practise the papers and think hard before looking at the answers provided.

Full answers and explanations will be provided on our feedback sessions.

In general, we expect units, directions, sensible answers and reasons in all questions.

Q1) There are 8 **more** boys than girls in Mr Hill's class.

There are 8 girls.

(a) How many boys are there in Mr Hill's class?

16 boys (1 mark)

(b) How would you describe the number of boys related to the number of girls?

Any correct explanation with the word "**double**" or "**half**", e.g.:
The number of boys is double the number of girls.

(1 mark)

Q2) Make a magic square of 15.

This means each row, column, and diagonal should add up to 15.

4	9	2
3	5	7
8	1	6

(3 marks)

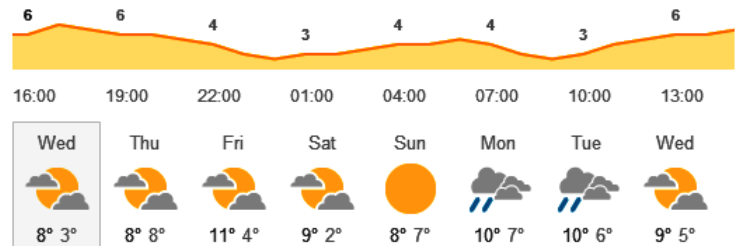
Q3) This picture shows the weather forecast for Croydon.

For each day there are two temperatures shown below; the maximum temperature and the minimum temperature.

Croydon, UK
Wednesday 16:00
Partly Cloudy



Precipitation: 10%
Humidity: 64%
Wind: 0 mph



(a) Which days will be rainy?

Monday and Tuesday (2 marks)

(b) What is the maximum temperature expected on Sunday?

8°C (1 mark)

Q4) Draw a ring around each **even** number.

0, 1, 4, 5, 7, 8

(1 mark)

Q5) Bavana wants to buy one banana.

Bananas cost **25p** each.

She has **12p**.

(a) How much more money does she need?

13p

(1 mark)

(b) What does **p** stand for?

pence

(1 mark)

Q6) Shiva is ten years old today.

Rami is twelve years old today.

How many years **older than**

Shiva is Rami?

2 (years)

(1 mark)

Q7) Write **unequal** numbers in the boxes to complete the sums below. Do not use the same number more than once.

$$\boxed{7} + \boxed{3} = 10$$

$$\boxed{8} + \boxed{2} = 10$$

$$\boxed{9} + \boxed{1} = 10$$

Or $6 + 4 = 10$.

One mark for each correct sum.

(3 marks)

Q8)

(a) Find three different pairs of numbers **in between** 1 and 10 that add up to 9.

Pair 1: 4 and 5

Pair 2: 3 and 6

Pair 3: 2 and 7

Or 1 and 8.

One mark for each correct sum.

(3 marks)

(b) Find two numbers between 1 and 10 that add up to 9. One must be double of the other.

3 and 6 (or 6 and 3)

(2 marks)

Q9) In this sequence what comes next?

10, 8, 6, 4, 2, 0

(1 mark)

Q10) There are two cups of the same size with water.

Cup A is half-empty.

Cup B is half-full.

Which cup has more water?

Both cups have the same (equal) amount of water.

(1 mark)

Q11) Which of these mean 1?

Tick (✓) the correct answer(s).

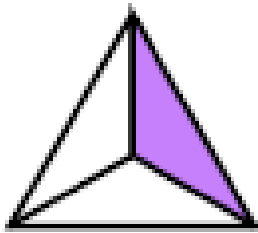
- | | |
|---|--------|
| ✓ | One |
| ✓ | Whole |
| ✓ | Unit |
| ✓ | 10 – 9 |

$\frac{1}{2}$ mark for each tick.

(2 marks)

Q12)

(a) What fraction has been shaded for you in this picture?



$\frac{1}{3}$ or one-third

(1 mark)

(b) What fraction has NOT been shaded for you in the above picture?

$\frac{2}{3}$ or two-third

(1 mark)

Q13) Look at the words in the box.

**kilograms, metres, hours,
centimetres, litres**

One of the words completes this sentence.

Ram is 97 **centimetres** tall.

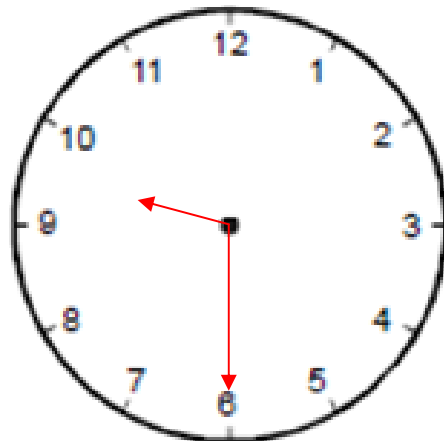
Write the correct word.

(2 marks)

Q14) Rathika's school starts at 9 o'clock.

Rathika went to the dentist and arrived at school half an hour late.

(a) Draw the time Rathika arrived at school on the clock.



Long hand and short hand at the correct positions.

(2 marks)

(b) Sam also studies at the same school. He arrived 10 minutes earlier than Rathika.

At what time did Sam arrive at school?

9:20 (am)

(1 mark)

Q15) Would you rather have 9p or 15p?

15p

(1 mark)

Why?

15p is more than 9p

(1 mark)

Accept any plausible answer.

Q16) You visit a Chinese takeaway shop to order 10 meals of which you take home 7.

How many meals have you enjoyed in the shop?

3

(1 mark)

Q17)

(a) How many of these coins make 16 p?



Answer: 8 (or eight)

(1 mark)

(b) A pencil costs 16p.

i) If you have 18p can you buy a pencil?

Yes

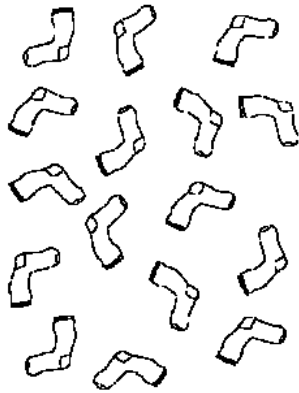
(1 mark)

ii) If you give a shopkeeper 20p to buy 1 pencil what will you receive as **change**?

4p

(1 mark)

Q18) Partition the socks into groups of four.



How many groups can you make?

4

(1 mark)

Q19) How many lines of symmetry does the following picture have?



Answer:

4

(2 marks)

Q20) Which object(s) can you use to trace a circle? Tick the correct answer(s).

Cone

50 pence coin

Ruler

Calculator

(1 mark)

Q21)

(a) Which shape has more sides than a square? Tick the correct answer.

Triangle

Kite

Pentagon

Rectangle

(1 mark)

(b) How many sides does this shape have?

5

(1 mark)

Q22) Which number is halfway between 7 and 11?

9

(1 mark)

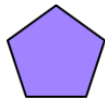
Q23) Estimate the number of people that can travel in a double decker bus?

80

Accept any answer between 50 and 100.

(1 mark)

Q24) Picture A:



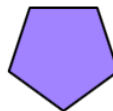
Which of the pictures below is the **half turn** of Picture A?

Tick the correct answer.

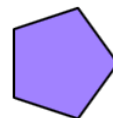
a)



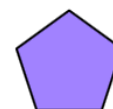
b)



c)



d)



(1 mark)

Q25) John wants to buy a sweet for 5p. He wants to pay for it exactly.

Which coin(s) could he use?

Indicate **all** of the ways it can be achieved.

The order of the coins is not important.

1) 5p

2) 2p + 2p + 1p

3) 2p + 1p + 1p + 1p

4) 1p + 1p + 1p + 1p + 1p

One mark for each way.

Accept answers with commas instead of addition (+) signs.

(4 marks)