Mathematics Challenge 2014

25th January 2014

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YEAR 2

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) Ram puts 20 apples in bags.

He puts 4 apples in each bag.
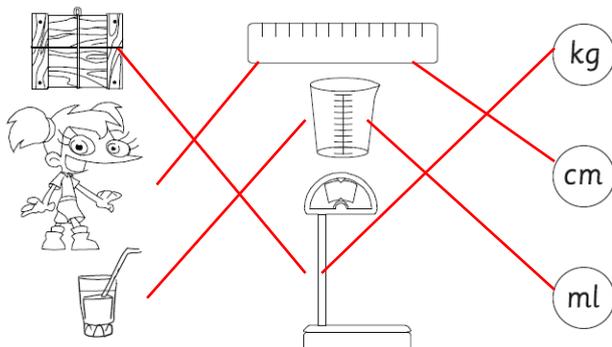
How many apples will be **left over**?

0 apples
Accept "zero" or "no"
(1 mark)

Q2) Complete the addition grid:

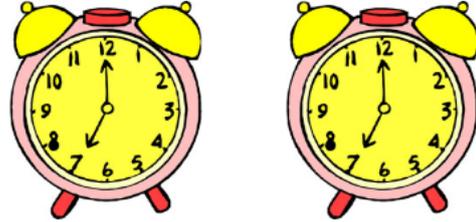| +	2	1	9
4	6	5	13
7	9	8	16
2	4	3	11

(3 marks)

Q3) Match the **weight** of the parcel, **height** of a person, **amount of drink,** the tool you would use to measure and then choose appropriate units. Draw lines to show the links.

(3 marks)

Q4) Mr Clocker says the following two clocks shows different **times**.
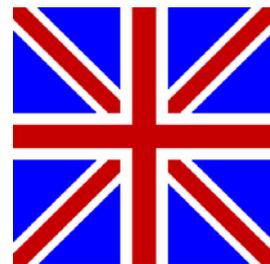

If you believe Mr Clocker, give two possible explanations.

1. One clock shows the time in the **evening** and the other clock shows the time in the **morning.**

2. The clocks show times on **different days.**

(2 marks)

Q5) How many **lines of symmetry** does the following shape have?

Answer: 4

(1 mark)

Q6) The number 64 can be written using the same number in a **product form** as:

$$8 \times 8$$

$$4 \times 4 \times 4$$

Can you express in another **similar** way?

$2 \times 2 \times 2 \times 2 \times 2 \times 2$ (1 mark)
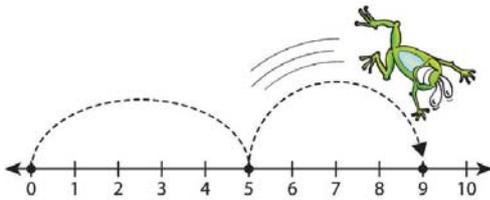
Q7) Ruby has £10 in her pocket.

(a) She spends £1.99. How much is left with her?

£8.01   (1 mark)

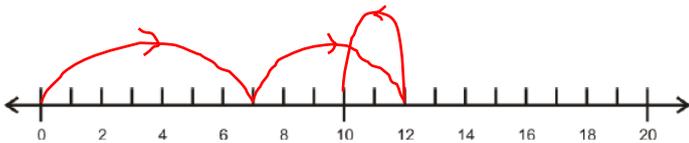**(b)** Roger takes £3 from his pocket. How much does he have?

£3   (1 mark)

Q8)

The above is an example of hops that shows 5 + 4.
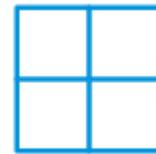Now draw directional hops on the number lines to show:

$$7 + 5 - 2$$

(No need to draw the frog).

(1 mark)

Q9) What comes next in the **sequence**? Draw the shape.

(2 marks)

Q10) Look at the shape and answer the questions:

(a) How many **squares** do you see altogether?

5

(1 mark)

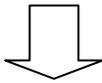**(b)** How many **rectangles** do you see altogether?

9

(1 mark)

Q11) Write these numbers in **ascending** order.

15,   12,   18,   10,   17,   9

| 9 | 10 | 12 | 15 | 17 | 18 |

(1 mark)

Q12) Tick the shape that is in the **bottom right** of the 3 by 3 grid.

(1 mark)

Q13) Write the missing number in each box.

19 — is 1 more than → 18

19 — is 11 more than → 8

19 — is 1 less than → 20

19 — is 11 less than → 30

18 — is 1 less than → 19

8 — is 11 less than → 19

(6 marks)

Q14)
(a) What is **half of half**?

$\frac{1}{4}$ or quarter   (1 mark)

(b) What is the **difference** between half and a whole?

$\frac{1}{2}$ or half   (1 mark)

(c) How much is **half of** £1 ?

50 pence   (1 mark)

Q15) One **morning** Rafeek and Anton were talking to each other face to face at a crossing. If Anton's shadow was exactly to the left of Rafeek, which direction was Rafeek facing? Circle the correct answer:

A. East   B. West

C. North   D. South

(2 marks)

Q16) John wants to buy a sweet for 6p. He wants to pay for it **exactly**.

Which coins could he use?

Any three from:
- 5p + 1p
- 2p + 2p + 2p
- 2p + 2p + 1p + 1p
- 1p + 1p + 1p + 1p + 1p + 1p

(3 marks)

Q17) John also wants to buy a pen for 69p. He gives £1 to the shopkeeper. How much **change** will he receive?

31 pence

(1 mark)

Q18) Write the missing number. One question is done for you.

5 → double and then subtract 3 → 7

6 → double and then half the result → 6

7 → multiply by itself and add 1 → 50

8 → half and then add 3 → 7

(3 marks)

Q19) Draw rings around all the multiples of 5.

0, 5, 10, 20, 50, 100

(1 mark)

Q20)

(a) Look at these **logical** signs.

> = <

Use one of the signs to make this statement **TRUE**:

20 > 10

(1 mark)

(b) Look at these **operational** signs:

+ - X ÷

Use one of the signs to make this statement **FALSE**:

2 - 2 = 4

or ÷

(1 mark)

Q21)

(a) You want to check your answer to this addition.

45 + 28 = 73

Which of these tells you that your answer is **correct**? Circle the correct letter(s).

A: 73 + 45 = 118

B: 73 – 45 = 28

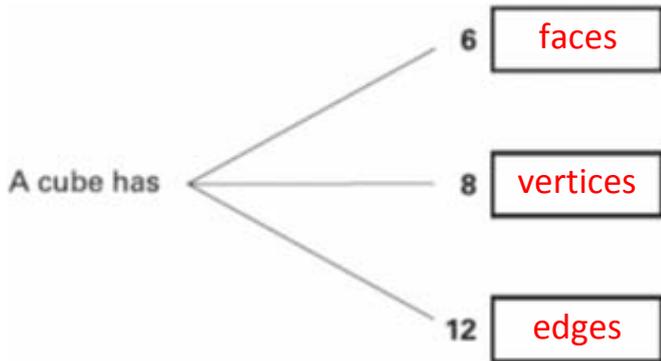C: 28 + 73 = 91

D: 45 – 28 = 17

(1 mark)

(b) Do you have to check your answers **generally**?

Yes   (1 mark)
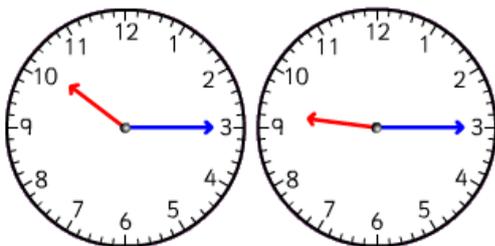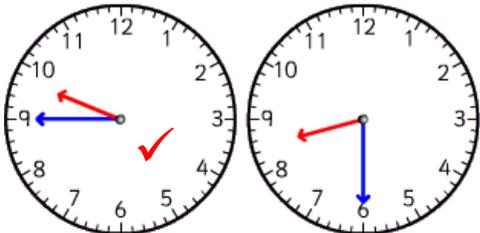
Q22) Choose the correct word from:

- faces
- edges
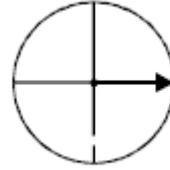- vertices

and write in the correct box.

A cube has:

6 → faces

8 → vertices

12 → edges

(3 marks)

Q23) Draw a tick ✓ on the clock which shows quarter to ten.
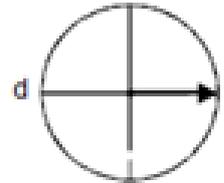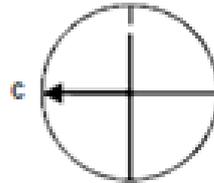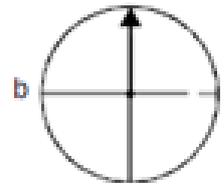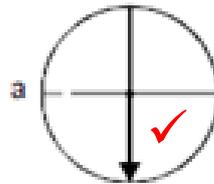

✓

(1 mark)

Q24) How will this arrow look after a quarter turn clockwise?

Tick (✓) the drawing **a**, **b**, **c** or **d** which shows this.

a ✓

b

c

d

(1 mark)

Q25)

(a) What is the difference in length between two pencils, one is 6 cm long and other is 60 mm long?

0 mm
or 0 cm
or "there is no difference" (or similar wording)   (1 mark)

(b) What is the difference in weight between two parcels, one weighs 6 kg and other weighs 6000 g?

0 g or 0 kg or "there is no difference" (or similar wording)   (1 mark)