**Year 8 – Spring Assessment 2**

**Time: 45 minutes Calculator allowed**

**Name: .................................... Maths Teacher: .........................**

**Date: ......................... Maths Class: .........................**

Answer all the questions

Read the questions carefully

Show your working

Check your answers

Mark (45)





**Things I need to practise:**

**Things I did well:**

**Q1.**          **Dollars**

          In America, there are coins each worth 25 cents.

          These coins are called **quarters** because four of them make one dollar.



(a)     Altogether, how many quarters make **3 dollars**?

  ....................

1 mark

(b)     Laura has **20 quarters**. How many dollars is that?

  ....................

1 mark

(c)     Dev wants to change **10 dollars** into quarters. How many quarters should he get?

  ....................

1 mark

**Q2.**          **Plastic bottles**

(a)     Look at this information about recycling:

|  |
| --- |
| **25** large plastic bottles can be recycled to make **1** fleece jacket. |

Write the missing number in this sentence.

   **200** large plastic bottles can be recycled to make ...................... fleece jackets.

1 mark

(b)     In a survey, **9 out of 10** people said they would like to recycle more.

What percentage of people said they would like to recycle more?

  ...................... %

1 mark

**Q3.**          **Shopping**

          Some people in a supermarket are shopping for food.

(a)     **100g** of cheese costs **46p**.

          Peter buys **250g** of the cheese.

          How much does he pay?

|  |  |
| --- | --- |
|  | £ |

1 mark

(b)     Tins of beans cost **36p each**.

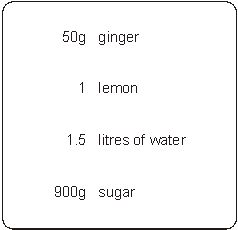
          What is the largest number of these tins John can buy with **£2**?

 .....................

1 mark

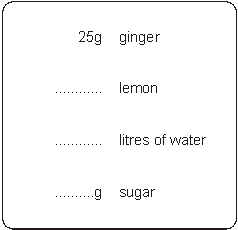
**Q4.**          **Caribbean cordial**

          Here are the ingredients for a cordial used to make a drink.



(a)     Jenny is going to make this cordial with **25g** of ginger.

          How much lemon, water and sugar should she use?



3 marks

(b)     The finished drink should be **cordial** and  **water**.

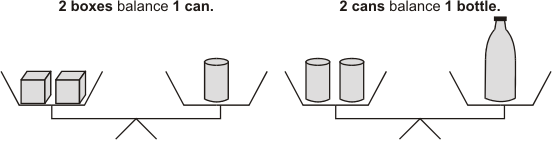
          Jenny puts **100 ml** of cordial in a glass.

          How much water should she put with it?

 .........................ml

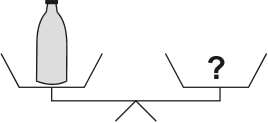
1 mark

**Q5.**          **Balancing**

****

How many **boxes** make each of these balance?

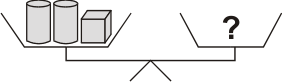
(a)



  ..................... boxes

1 mark

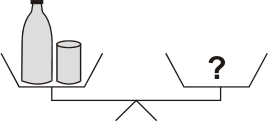
(b)



  ..................... boxes

1mark

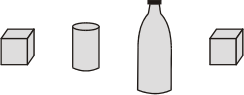
(c)



  ..................... boxes

1 mark

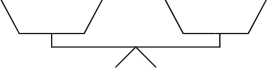
(d)     Joe has these four things:



          He wants to put them on the scales to make them balance.

          Show where each thing must go on the scales.

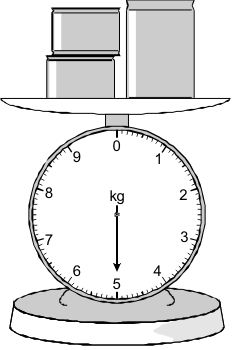




1 mark

**Q6.**          **Weighing**

          There are two small tins and one big tin on these scales.



          The two small tins each have the same mass.  
The mass of the big tin is **2.6 kg**.

          What is the mass of one small tin?  
Show your working.



|  |
| --- |
| kg |

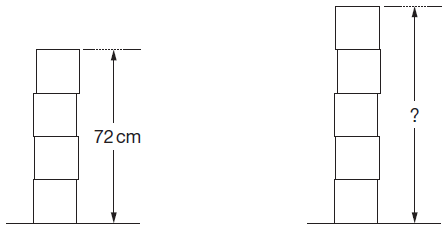
**2 marks**

**Q7.**          **Boxes**

          Lisa has some boxes that are all cubes of the same size.

          She uses four of the boxes to make a pile with a height of **72 cm**.

          She puts one more box on top of the pile.



          Work out the height of the pile of **five** boxes.



....................... cm

2 marks

**Q8.**          **Litres to gallons**

          A petrol station shows this information:

|  |
| --- |
| 10 litres = 2.2 gallons |

          How many gallons is **50 litres**?



..................... gallons

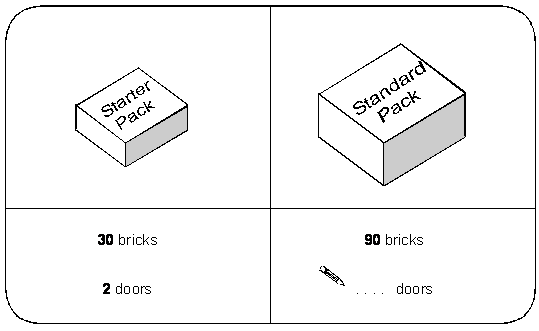
2 marks

**Q9.**          **Building kits**

          Toy building kits come in three sizes.

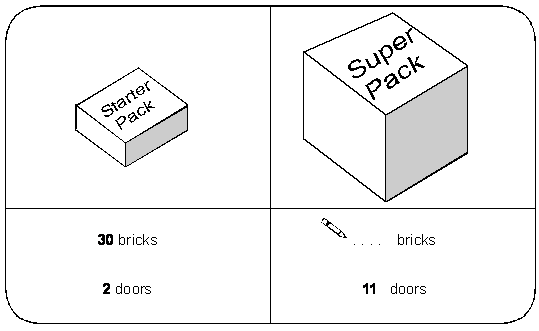
          The **ratio** of **bricks** to **doors** is the **same** in each pack.

(a)     Work out how many doors there are in a Standard pack.



1 mark

(b)     Work out how many **bricks** there are in a Super pack.



1 mark

**Q10.**          **Doughnuts**

          Here are the prices of doughnuts at two different shops.

|  |  |  |
| --- | --- | --- |
| Shop A |  | Shop B |
| 3 doughnuts for £2 |  | 5 doughnuts for £3.50 |

          I want to buy **15** doughnuts.

          In which shop are the doughnuts **cheaper**?

          You **must** show your working.



          Tick () your answer.

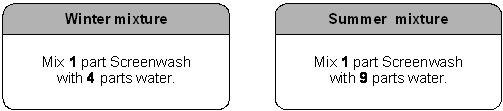
      Shop A               Shop B

2 marks

**Q11.**          **Screenwash**

          Screenwash is used to clean car windows.

To use Screenwash you mix it with water.



(a)     In **winter,** how much water should I mix with **150ml of Screenwash**?

  .......................... ml

1 mark

(b)     In **summer,** how much Screenwash should I mix with **450ml of water**?

  .......................... ml

1 mark

(c)     Is this statement correct?

|  |
| --- |
| **25%** of **winter** mixture is **Screenwash**. |

Tick () Yes or No.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | True |  |  | False |  |

Explain your answer.



1 mark

**Q12.**          **Paint**

          You can make different colours of paint by mixing red, blue and yellow in different **proportions.**

          For example, you can make green by mixing **1 part blue** to **1 part yellow.**

(a)     To make purple, you mix 3 parts red to 7 parts blue.

          How much of each colour do you need to make **20** **litres** of purple paint?

          Give your answer in litres.



..................... litres of red   and   ..................... litres of blue

2 marks

(b)     To make orange, you mix **13** **parts yellow** to **7 parts red.**

          How much of each colour do you need to make **10 litres** of orange paint?  
Give your answer in litres.



..................... litres of yellow   and   ..................... litres of red

2 marks

**Q13.**          **Cutting a cake**

          Ben is **10** years old.

          Cindy is **15** years old.

          Tom is **20** years old.

          They are going to cut a cake into 3 slices from the centre.

          The size of the slices will be proportional to their ages.

          What will the **angle** at the centre of **Ben’s** slice be?



..................°

2 marks

**Q14.**          One morning last summer Ravi carried out a survey of the birds in the school garden.

          He saw 5 pigeons, 20 crows, 25 seagulls and 45 sparrows.

          Complete the line below to show the ratios.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Pigeons | : | Crows | : | Seagulls | : | Sparrows |
|  | 1 | : | **...........** | : | **...........** | : | **...........** |

                                                                                                                                                     2 marks

**Q15.**          **Yoghurt**

          A dessert has both fruit and yoghurt inside.



**Altogether**, the mass of the fruit and yoghurt is **175g**.

          The **ratio** of the mass of **fruit** to the mass of **yoghurt** is **2 : 5**

          What is the mass of the yoghurt?



...................... g

2 marks

**Q16.**          **Conversion**

Here are some exchange rates.

|  |
| --- |
| £1 = 2.03 American dollars |
| £1 = 2.15 Canadian dollars |

Use the exchange rates to answer this question.

How many **more Canadian** dollars than American dollars would you get for £250?



|  |
| --- |
| dollars |

2 marks

**Q17.**          **Tennis prizes**

          Each year, there is a tennis competition in Australia and another one in France.

          The table shows how much money was paid to the winner of the men’s   
competition in each country in 2002.

|  |  |
| --- | --- |
| Country | Money |
| Australia | 1000 000 Australian dollars  (£1 = 2.70 Australian dollars) |
| France | 780 000 Euros  (£1 = 1.54 Euros) |

          Which country paid **more** money?

          You **must** show your working.



          Tick () the country that paid more.

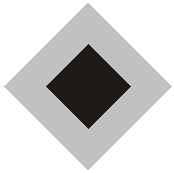
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Australia |  | France |

2 marks

**Q18.**          **Grey and black designs**

(a)     In this design, the ratio of **grey to black** is **3 : 1**

          What **percentage** of the design is black?



  ............................%

1 mark

(b)     In this design, **60%** is **grey** and the rest is black.

          What is the ratio of **grey to black**?

          Write your ratio in its simplest form.





............. : .............

2 marks