**Ratio and Proportion (H)**

Pre-Intervention Assessment

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Class: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |
| --- | --- | --- |
| **Question** | **Objective** | **RAG** |
|  1 | Calculate the best value product |  |
|  2 | Calculate with recipes |   |
|  3 | Calculate with exchange rates |   |
|  4 | Calculate with direct and inverse proportion |   |

**1.** Carrots cost £1 for a 1.2 kg bag at Tesco.

The same type of carrots cost 77 pence for a 700 g bag at ASDA.

 Where are the Carrots better value? You must show your working.

.....................................

**2.** Here are the ingredients needed to make 16 gingerbread men.

|  |
| --- |
| **Ingredients to make 16 gingerbread men**180g flour40g ginger110g butter30g sugar |

Hamish wants to make 24 gingerbread men.

Work out how much of each of the ingredients he needs.

……………… g flour

……………… g ginger

……………… g butter

……………… g sugar

**3.** Stephen imports cars from the USA. He sells them in the UK.

He has just bought a car in the USA costing $24 000. It cost him £900 to import the car to the UK.

 The exchange rate is £1 = $1.45

 Stephen needs to make a profit of 20% on his total costs.

Work out the least amount that Stephen must sell the car for in the UK. Give your answer in pounds.

£ …………………….

**4**. In a factory, chemical reactions are carried out in spherical containers.

The time, T minutes, the chemical reaction takes is directly proportional to the square of the radius, R cm, of the spherical container.

 When R = 120, T = 32

 Find the value of T when R = 150

T = ...........................................................

[Glue here]