



# FUNCTIONAL SKILLS MATHEMATICS

AQA | Edexcel | City & Guilds | Open Awards | NCFE | Highfield

Level 2

## Proportion

### Materials

- You **cannot** use a calculator for **questions** with this symbol.



### Instructions

- Answer **all** questions.
- Answer questions on separate paper.

### Information and Advice

- The marks for each question are shown in brackets – use this as a guide on how long to spend on each question.
- Read each question carefully before you answer it.
- Check you answers.



**Q1** Jermaine has a recipe for making cookies. The recipe says to use 200 g of chocolate chips for every egg used. Jermaine is going to use 3 eggs.  
How many grams of chocolate chips will he need to use?  
**[1 mark]**

**Q2** Rick is making soup. The recipe says to use 2 litres of hot water for every 600 g of carrots used. Rick is going to use 1200 g of carrots.  
How much hot water should Rick use?  
**[1 mark]**

**Q3** Alana is making some bread rolls. The recipe says to use 2 teaspoons of salt for every 500 g of white flour used. Alana is going to use 6 teaspoons of salt.  
How much white flour should Alana use?  
**[1 mark]**

**Q4** Theo is making a coffee. He adds 500 ml of hot water to 20 g of coffee. This makes 2 cups. He wants to make 4 cups.  
**4(a)** How much coffee should Theo use?  
**[1 mark]**

**4(b)** How much hot water should Theo use?  
**[1 mark]**



**Q5** Michelle is making a chicken casserole. Her recipe says to use 1 stock cube for every 400 g of chicken. This recipe serves 2 people.  
Michelle wants to make chicken casserole for 8 people.  
**5(a)** How many stock cubes will she need to use?  
**[1 mark]**

**5(b)** How much chicken will she need to use?  
**[1 mark]**



**Q6** Neil is a builder. To make concrete he uses 5 kg of cement, 6 litres of water, and 25 kg of aggregate. Neil is going to use 10 kg of cement instead.

**6(a)** How much water will he need to use?

**[1 mark]**

**6(b)** How much aggregate will he need to use?

**[1 mark]**

**Q7** Angela has a recipe for a mocktail. She wants to make a big batch of this mocktail for her and her friends. Here is her recipe:

Limeade:	300 ml
Lemonade:	150 ml
Orange Juice:	50 ml

This recipe makes 2 servings. Work out how much of each ingredient Angela would need to make 10 servings.

**[2 marks]**

**Q8** Matteo is making a pasta bake, using the ingredients below:

300 g of pasta
500 g of sauce
100 g of cheese

This recipe makes 4 servings. Work out how much of each ingredient Matteo would need to make 12 servings.

**[2 marks]**

**Q9** Sophie has a recipe to make cupcakes. The recipe requires 500 g of chocolate to make 16 cupcakes. However, she only wants to make 4 cupcakes.

How much chocolate will he need to use?

**[2 marks]**



**Q10** It takes 4 builders 6 weeks to build a structure. How long would it have taken 6 builders to build the same structure?

**[2 marks]**

**Q11** A porridge contains 12 g of fibre per 100 g. How much fibre would a 40 g serving of the porridge contain?

**[2 marks]**



**Q12** Nicoleta runs 5 km in 40 minutes. Assuming she runs at the same speed, how long should it take her to run 9 km?

**[2 marks]**

**Q13** It takes 3 gardeners 45 minutes to cut the grass of a sports field. Assuming they all work at the same rate, how long would it take:

**13(a)** 5 gardeners to cut the same grass?

**[2 marks]**

**13(b)** 2 gardeners to cut the same grass?

**[1 mark]**

**Q14** A volunteer group has 4 members working. To hand out all of the leaflets, each member needs to hand out 300 leaflets per hour.

**14(a)** At what rate would 5 members need to work to hand out all of the leaflets?

**[2 marks]**

**14(b)** How many members would be needed so they could hand out 80 leaflets per hour?

**[1 mark]**

**Q15** Rashid collects the following information about taxi fares and journey time.

<b>Cost of fare (£)</b>	5	10	15	20
<b>Journey time (minutes)</b>	8	16	24	30

He says that the journey time of a taxi and the cost of the fare is directly proportional. Is he correct? Explain your answer.

**[3 marks]**