Test - Ratio and proportion

Year: Year 8 · Duration: 45 minutes · /20

Name:	Date:	**Mark: /20**

Question	1	2	3	4	5	Total
marks	4	4	4	4	4	**20**
Mark						

Show your working.

Question 1 (4 marks)

Question 1 – Ratio skills

Answer all parts. Show your working.

a. Simplify the ratio $36 : 48$. (1 mark)
b. Write $2.4 : 6$ in the form $1 : n$. (1 mark)
c. Share £90 in the ratio $2 : 3 : 4$. (2 marks)

Question 2 (4 marks)

Question 2 – Proportion

Use the unitary method.

a. 6 notebooks cost £7.20. Find the cost of 10 notebooks. (2 marks)
b. A car travels 156 miles on 12 litres of petrol. How far can it go on 20 litres? (2 marks)

Question 3 (4 marks)

Question 3 – Inverse proportion and scale

Answer each part.

a. 5 builders take 12 days to build a wall. How long will 4 builders take? (2 marks)
b. A map has a scale of 1:25 000. Two towns are 8 cm apart on the map. Find the real distance in km. (2 marks)

Question 4 (4 marks)

Question 4 – Problem: the cake sale

Sam and Tia bake cakes for a cake sale. They make 72 cakes in the ratio of their ingredient contributions, Sam : Tia $= 5 : 3$. They sell each cake for £1.50 and share the

money in the same ratio.

a. How many cakes did each person bake? (2 marks)
b. Find the total money from selling all the cakes. (1 mark)
c. How much does Tia receive? (1 mark)

Question 5 (4 marks)

Question 5 – Problem: best buy

A pack of 6 batteries costs £4.80. A pack of 10 batteries costs £7.60 and a pack of 24 batteries costs £17.

a. Work out the cost of one battery in each pack. (2 marks)
b. Which pack is the best value? (1 mark)
c. Zoe needs 40 batteries. What is the cheapest way to buy at least 40 using these packs? (1 mark)