QT Proportion

1. Eleven pencils cost £0.99.
Work out the cost of 22 of these pencils. (1 mark)

99
× 2
198

£1.98.

2. 13 chocolate bars costs £6.37.
Work out the cost of 18 of these chocolate bars. (2 marks)

49
13 ⟌637
52
117

49
× 18
392
490
882

£8.82.

3. 12 fruity chews cost £3.24.
Work out the cost of 19 fruity chews. (2 marks)

324 ÷2 = 162 = 81 = 27
12 6 3
÷2

27
× 19
243
270
513

£5.13.

4. The total price for 8 licorice sticks is £4.72.
Work out the cost of 21 licorice sticks. (2 marks)

472 = 236 = 118 = 59
8 4 2

59
× 21
59
1180
1239

£12.39

QT Proportion

5. 7 blue pens cost £1.89.
Work out the total price of 21 blue pens. (2 marks)

$7\overline{)189}$ = 27

27 × 21 = 27 + 540 = 567

£5.67

6. The total price for 3 board marker pens is £2.43.
Work out the cost of 16 board marker pens. (2 marks)

$3\overline{)243}$ = 81

81 × 16 = 486 + 810 = 1296

£12.96

7. The cost of 3.5 kg of pears is £2.31.
The total cost of 10.5 kg of pears and 0.5 kg of oranges is £7.53.
Work out the cost of 1 kg of oranges. (3 marks)

$\frac{2.31}{3.5}$ = 66p per kg

10.5kg pears = £6.93

7.53 − 6.93 = 0.60 = 0.5kg oranges

£1.20 = 1kg oranges

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8. The cost of 0.5 kg of apples is £0.38.
The total cost of 1.5 kg of apples and 3.5 kg of lemons is £3.03.
Work out the cost of 1 kg of lemons. (3 marks)

38
× 3
114 = 1.5kg apples

303 −
114
189 = 3.5kg lemons

189 / 3.5 = 54p.

1kg lemons = 54p.

9. The cost of 0.5 kg of nectarines is £0.48.
The total cost of 1 kg of nectarines and 0.5 kg of pears is £1.52.
Work out the cost of 1 kg of pears. (3 marks)

1kg nectarines 48
× 2
96

152 −
96
56 = 0.5kg pears

56
× 2
112

1kg pears = £1.12

10. The cost of 2.5 kg of melons is £1.05.
The total cost of 5 kg of melons and 1.5 kg of pears is £3.54.
Work out the cost of 1 kg of pears. (3 marks)

1kg melons = 210

144 / 1.5 = 96

354 −
210
144 = 1.5kg pears

1kg pears = 96p.

QT Proportion

11. The cost of 0.5 kg of apples is £0.38.
The total cost of 2 kg of apples and 2.5 kg of nectarines is £4.52.
Work out the cost of 1 kg of nectarines. (3 marks)

2kg apples 38 × 4 = 152

452 − 152 = 300 = 2.5kg nectarines

300 / 2.5 = 120

€1.20.

12. Here is a list of ingredients for making 12 small cakes.
180 g margarine
180 g sugar
200 g plain flour
1 teaspoon baking powder
2 eggs

Aqdas is going to make 24 of the small cakes.
(a) Work out how much margarine he needs. (2 marks)

180 × 2 = 360

360g margarine

Ahmed is going to make 18 of the small cakes.
(b) Work out how much flour he needs. (2 marks)

×1.5 (200g = 12 cakes / 300g = 18 cakes) ×1.5

300g flour

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13. Here are the ingredients needed to make 16 gingerbread men.
180 g flour
40 g ginger
110 g butter
30 g sugar
Cas wants to make 40 gingerbread men.
Work out how much of each of the ingredients she needs. (3 marks)

16 × 2.5 = 40

Flour 180 × 2.5 = 450g
Ginger 40 × 2.5 = 100g
Butter 110 × 2.5 = 275g
Sugar 30 × 2.5 = 75g

14. 350g of flour is needed to make 18 mince pies.

Priya has 875g of flour.
Does Priya have enough flour to make 45 mince pies?
You must show clearly how you got your answer. (4 marks)

÷2 ÷2
350/18 = 175/9 g flour each mince pie (19.4)

175/1 × 45/1 = 175 × 5 / 875

Yes 875g is required

QT Proportion

15. This is a list of ingredients for making an apple & peanut crumble for 4 people.

60 g plain flour
40 g ground peanuts
90 g soft brown sugar
60 g butter
4 apples

Micheal wants to make an apple & peanut crumble for 10 people.

Here is a list of the amount of each ingredient Micheal has in his cupboard.

350 g plain flour
100 g ground peanuts
200g soft brown sugar
150 g butter
6 apples

Work out which ingredients Micheal needs to buy more of.

You must show all of your working. (4 marks)