

Proportion

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NAME _____

DATE _____

- 1 Here is a list of the ingredients needed to make 6 pancakes.

 EITHER PAPER 4 MARKS

plain flour	156 g
milk	48 ml
sugar	36 g

- (a) Callum wants to make 16 pancakes.

Calculate how much milk he needs.

- (b) On another day Callum has 624 g of plain flour and plenty of the other ingredients.

Find the greatest number of pancakes he can make.

- 2 Priya buys 6 bottles of water. She pays £3.30 altogether.

 EITHER PAPER 4 MARKS

All the bottles of water cost the same.

- (a) Find the cost of 4 bottles of water.

- (b) Work out how many bottles of water can be bought for £4.95.

- 3 A recipe for 12 flapjacks uses 220 g of oats, 130 g of butter and 60 g of golden syrup.

 EITHER PAPER 3 MARKS

Owen wants to make 60 flapjacks. Owen has 700 g of butter.

Does Owen have enough butter to make 60 flapjacks?

You must show how you get your answer.

- 4 1.2 metres of ribbon cost £2.64.

 EITHER PAPER 3 MARKS

Find the cost of 3.5 metres of ribbon.

- 5 A machine prints labels at a steady rate. The table should show how many labels it prints.

 EITHER PAPER 3 MARKS

Time (min)	Labels
2	12
7	42
10	60
16	97

One of the four values in the second column is wrong.

- (a) Which row of the table is wrong?

You must show your working.

- (b) Calculate the value that should be there.

- 6 A school disco must have at least one staff member for every 19 pupils.

 EITHER PAPER 3 MARKS

- (a) 99 pupils want to take part.

Find the smallest number of staff members needed.

- (b) On a different day only 3 staff members are available.

Find the greatest number of pupils who can take part.

7 Last week, Ben worked for 13 hours.

 EITHER PAPER 5 MARKS

Ben paid no tax and received £169.00.

(a) This week, Ben works for 21 hours.

Ben assumes he will be paid at the same rate per hour and pay no tax.

Work out how much Ben expects to receive this week.

(b) In fact, this week Ben is paid an extra 50p per hour and pays £10.50 tax.

What does this tell you about the amount Ben receives?

Tick one box.

- ☐ It is less than he expected
- ☐ It is the same as he expected
- ☐ It is more than he expected

Show working to support your answer.

8 Marcus buys 2 metres of linen at £9.50 per metre.

 EITHER PAPER 6 MARKS

He also buys 2 metres of cotton.

The total cost is £31.90.

(a) Find the cost of one metre of cotton.

(b) Buttons cost 87p each.

The greatest number of buttons Marcus can buy with £11 is 12.

Marcus says, "The greatest number of buttons I can buy with £22 is 24 because £22 is double £11."

Is Marcus correct?

You must show your working.

9 A machine folds a constant number of leaflets per minute.

 EITHER PAPER 3 MARKS

The machine takes 6 minutes to fold a batch of 384 leaflets.

How long does it take the machine to fold a larger batch of 2320 leaflets?

Give your answer in minutes and seconds.

10 It takes 8 gardeners 21 hours to clear a field.

 EITHER PAPER 3 MARKS

Calculate how long it would take 7 gardeners to clear the same field.

Assume that all the gardeners work at the same rate.

1	(a) 128 ml (b) 24	2	(a) £ 2.20 (b) 9
3	Yes. 60 flapjacks need 650 g of butter, and Owen has 700 g.	4	£ 7.70
5	(a) The row for 16, which gives 97 (b) 96 labels	6	(a) 6 staff members (b) 57 pupils
7	(a) £ 273 (b) It is the same as he expected: £ 273.00 received against £ 273.00 expected	8	(a) £ 6.45 (b) No: with £22 Marcus can buy 25 buttons, and $2 \times 12 = 24$, which is not equal to 25
9	36 minutes 15 seconds	10	24 hours