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GCSE Exam Questions

Proportion | Ratio & Proportion

GCSE Exam Questions: Proportion

1) Here is a recipe for 16 flapjacks:

125 *g*	Butter
125 *g*	Golden Syrup
50 *g*	Sugar
175 *g*	Oats

(a) Sarah wants to make 32 flapjacks.

How much golden syrup should she use?

------------------------------g

(2)

(b) Tariq wants to make 8 flapjacks.

How much sugar should he use?

------------------------------g

(2)

(c) Ursula has 0.5 *kg* of oats and plenty of other ingredients.

Can she make 40 flapjacks?

Explain how you got your answer.

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(4)

(8 marks)

2) 6 workers take 14 hours to paint a fence.

How many hours do 4 men need to paint the same fence?

----------------------hours

(2 marks)

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GCSE Exam Questions: Proportion

3)   Given that y is inversely proportional to x, complete the table of values:

x	1	2	3	8
y	48			

(3 marks)

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4)   **(a)** y is inversely proportional to x.

When $x = 5$, $y = 4$.

Find an equation for y in terms of x.

$y = \text{_____}$

(3)

     (b)   Find y when x is 10.

$y = \text{_____}$

(2)

     (c)   Find x when y is 0.5.

$x = \text{_____}$

(2)

(7 marks)

GCSE Exam Questions: Proportion Answers

		Question	Answer	Marks
1)		Here is a recipe for 16 flapjacks: 125 *g* Butter 125 *g* Golden Syrup 50 *g* Sugar 175 *g* Oats		
	(a)	Sarah wants to make 32 flapjacks. How much golden syrup should she use?	(a) 125×2 250 *g*	**(1)** **(1)**
	(b)	Tariq wants to make 8 flapjacks. How much sugar should he use?	(b) $50 \div 2$ 25 *g*	**(1)** **(1)**
	(c)	Ursula has 0.5 *kg* of oats and plenty of other ingredients. Can she make 40 flapjacks? Explain how you got your answer	(c) $0.5 \times 1000 = 500\ g$ $40 \div 16 = 2.5$ $175 \times 2.5 = 437.5\ g$ Yes **and** 437.5 g is less than 500 *g* **oe**	**(1)** **(1)** **(1)** **(1)**
2)		6 workers take 14 hours to paint a fence. How many hours would 4 men have taken to paint the same fence?	$14 \times 6 \div 4$ 21 hours	**(1)** **(1)**
3)		Given that *y* is inversely proportional to *x*, complete the table of values: 	*x*	1	2	3	8
y	48						*x*	1	2	3	8
y	48	24	16	6	 24 16 6	 **(1)** **(1)** **(1)**
4) (a)		*y* is inversely proportional to *x*. When *x* = 5, *y* = 4. Find an equation for y in terms of *x*.	(a) $y = \dfrac{k}{x}\ or\ 4 = \dfrac{k}{5}\ oe$ $k = 20$ $y = \dfrac{20}{x}$	**(1)** **(1)** **(1)**
	(b)	Find *y* when *x* is 10.	(b) $y = \dfrac{20}{10}$ $y = 2$	**(1)** **(1)**
	(c)	Find *x* when *y* is 0.5.	(c) $0.5 = \dfrac{20}{x}\ or\ x = \dfrac{20}{0.5}\ oe$ $x = 40$	**(1)** **(1)**

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