



Aberdare Community School
Mathematics Department

WJEC GCSE
Higher – Non Calculator
Number

Number - start of paper questions

Name:

Set:

Date:

Teacher:

1. A 200 ml tin of pink paint is made by mixing 150 ml of white paint and 50 ml of red paint. Find how much white paint is needed to make a 300 ml tin of the pink paint.

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White paint ml

[2]

12. The cost of a weekly travel ticket increases from £12 to £15. Find the percentage increase in the cost of the weekly travel ticket.

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[3]

1. Clearly showing how you obtained your answer, ESTIMATE the value of:

$$\frac{87 \times 248}{52}$$

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[2]

2. (a) Find 240 as a percentage of 600.

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[2]

(b) A recipe for making 12 pancakes includes the following ingredients.

- 2 large eggs
- 200ml milk
- 110g flour

Calculate the quantities of these ingredients needed to make 30 pancakes.

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[3]

2. William goes on holiday for two weeks. During his holiday William uses $\frac{3}{4}$ of a large bottle of water every day. What is the least number of large bottles of water William needs to buy to last for the two weeks he is on holiday?

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[3]

1. Norah and Janice share £300 in the ratio 9:1. Calculate the share of the money Norah and Janice will each receive.

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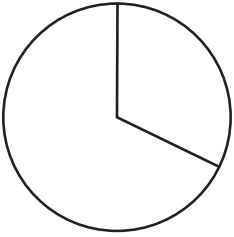

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[2]

3. In school, Nia has learnt about time, fractions and decimals. She makes mistakes in her work as shown below.

	20 minutes	$= \frac{1}{3}$ hour	$= 0.3$ hour	
	40 minutes	$= \frac{2}{3}$ hour	$= 0.6$ hour	
	Adding 60 minutes	$= 1$ hour	$= 0.9$ hour	

Explain the mistakes that Nia has made.

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[2]

3. (a) Estimate the value of $\frac{49 \times 396}{199}$.

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[2]

- (b) Given that $36 \times 428 = 15\,408$, write down the value of $\frac{15\,408}{3 \cdot 6}$.

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[1]

- (c) William scores 45 out of 50 in an English test. Express this as a percentage.

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[1]

- (d) Which of the following fractions is closest to $\frac{1}{4}$?

$$\frac{13}{20}$$

$$\frac{2}{5}$$

$$\frac{3}{10}$$

Show how you made your decision.

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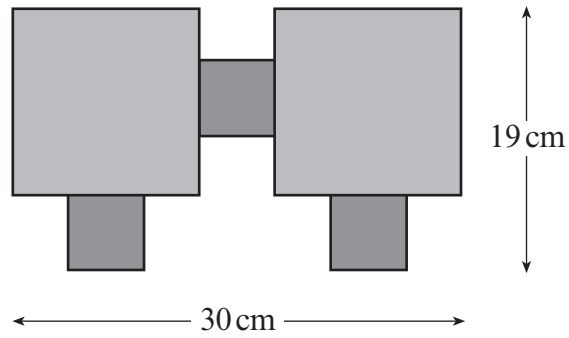
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[3]

1. The diagram shows 2 identical large square tiles and 3 identical small square tiles.



Find the length of each of the small square tiles.

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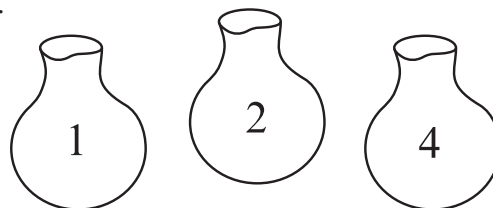
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[2]

3. (a) Three bags each contain a large number of cards.
The cards in the first bag are all numbered 1.
The cards in the second bag are all numbered 2.
The cards in the third bag are all numbered 4.



- (i) Six cards are selected from the bags.
The sum of the numbers on the cards selected from the bags is 20.
What are the six numbers on the cards selected?

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- (ii) Explain why it is not possible to select four cards from the bags to give a sum of 20.

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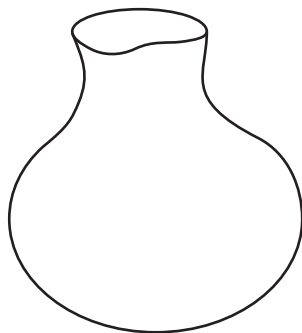
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[2]

- (b) All the cards from the three small bags are put together in one large bag.



There are 95 cards in the bag.
Twenty cards are numbered 2.
The probability of selecting a card numbered 4 from the bag is twice the probability of selecting a card numbered 2.
How many of the cards are numbered 1?

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[2]

2. A farmer has 336 kg of potatoes for sale.
He sells them in 5 kg bags and 2 kg bags.
He uses the same number of 5 kg bags as 2 kg bags.
How many bags does he need altogether?

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[4]

1. (a) Estimate the value of $\frac{81 \times 1205}{398}$.

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[2]

- (b) Given that $79 \times 402 = 31758$, find the value of $\frac{31758}{40.2}$.

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[1]

- (c) Sasha scores 45 out of 150 in an English test. Express this as a percentage.

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[2]

- (d) Find which of the following fractions is closest to $\frac{2}{5}$.

$$\frac{7}{20} \quad \frac{3}{8} \quad \frac{3}{10}$$

Show how you made your decision.

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[3]

1. (a) Estimate the value of $\frac{207 \times 148}{49}$.

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- (b) Given that $47 \times 235 = 11045$, write down the value of $\frac{1104.5}{0.47}$.

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[1]

- (c) In a quiz, a team scores 13 out of 20. Express this as a percentage.

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[1]

- (d) Which of the following fractions is closest to $\frac{2}{5}$?

$$\frac{7}{20} \quad \frac{1}{4} \quad \frac{7}{15}$$

Show all your working.

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[3]



4.

(c) Showing **all** your working, write $\frac{4}{15}$, $\frac{1}{6}$ and $\frac{2}{5}$ in descending order.

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[3]

2. (a) Express $\frac{3}{8}$ as a decimal.

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- (b) Express $\frac{0.12 \times 0.03}{36}$ as a fraction in its simplest form.

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[3]

3. (a) Show that $7 \cdot 02^2 - 3 \cdot 9^2$ is approximately 33.

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- (b) Calculate $6\frac{1}{4}\%$ of £40.

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[3]

- (c) Write down the reciprocal of 2.5.

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(b) The sum of 4 consecutive prime numbers is 60.
Calculate the sum of these 4 prime numbers together with the next two prime numbers.

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[4]

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02/00/05

3. (a) Complete the following table.
The fraction must be expressed in its simplest form.

[3]

Fraction	Decimal	Is this a recurring or terminating decimal?
$\frac{2}{3}$	0. $\dot{6}$	recurring
.....	0.15
$\frac{7}{11}$

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- (b) Express $\frac{0.24 \times 0.03}{0.002}$ as an improper fraction in its simplest form.

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1. (a) Estimate the value of $\frac{43.3 \times 49.8}{200}$. [2]

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- (b) Estimate the value of $\frac{0.963}{0.482}$. [1]

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- (c) Given that $54 \times 732 = 39528$, find the exact value of the following.

- (i) 0.054×73.2 [1]

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- (ii) $\frac{39528}{0.54}$ [1]

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- (d) Write down the value of one half of $3\frac{1}{2}$. [2]

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3. (a) Find the highest common factor of 36 and 90.

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- (b) Find the lowest common multiple of 4 and 6.

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- (c) Evaluate $\left(2.5 \div 10 + 2\frac{3}{4}\right)^2$.

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- (d) Express $\frac{0.15 \times 0.4}{60}$ as a fraction in its simplest form.

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3. (a) The product of three consecutive prime numbers is 385.
Find the **sum** of these three prime numbers.

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Sum of these three prime numbers =