

1

The numbers in this sequence **increase** by 45 each time.

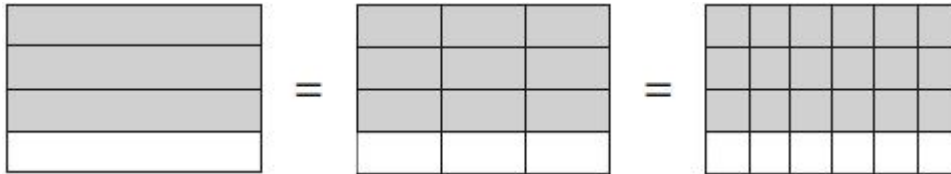
Write the missing numbers.

	155	200	245			
--	-----	-----	-----	--	--	--

2 marks

2

These diagrams show three equivalent fractions.



Write the missing values.

$$\frac{3}{4} = \frac{9}{\boxed{}} = \frac{\boxed{}}{24}$$

1 mark

3

Write the missing numbers to make this **multiplication** grid correct.

×			
9		63	54
		56	48

1 mark

4

In this grid, there are four multiplications.

Write the **three** missing numbers.

4	×	8	=	
×		×		
3	×		=	21
=		=		
		56		

1 mark

5

Write the missing number.

One is done for you.

180 $\xrightarrow{\text{is 20 more than}}$ 160

$\xrightarrow{\text{is 20 more than}}$ 237

1 mark

6

Here are some sentences about an amount of money.

Mark each sentence with a tick (✓) if it is correct.

Put a cross (X) if it is not correct.

One has been done for you.

£1.03 can be made with exactly 1 coin.

X

£1.03 can be made with exactly 2 coins.

☐

£1.03 can be made with exactly 3 coins.

☐

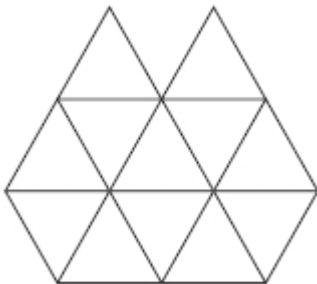
£1.03 can be made with exactly 4 coins.

☐

1 mark

7

Shade $\frac{1}{4}$ of this shape.



1 mark

8

Complete the table.

	Round 39,476
to the nearest 10,000	
to the nearest 1,000	
to the nearest 100	

2 marks

9

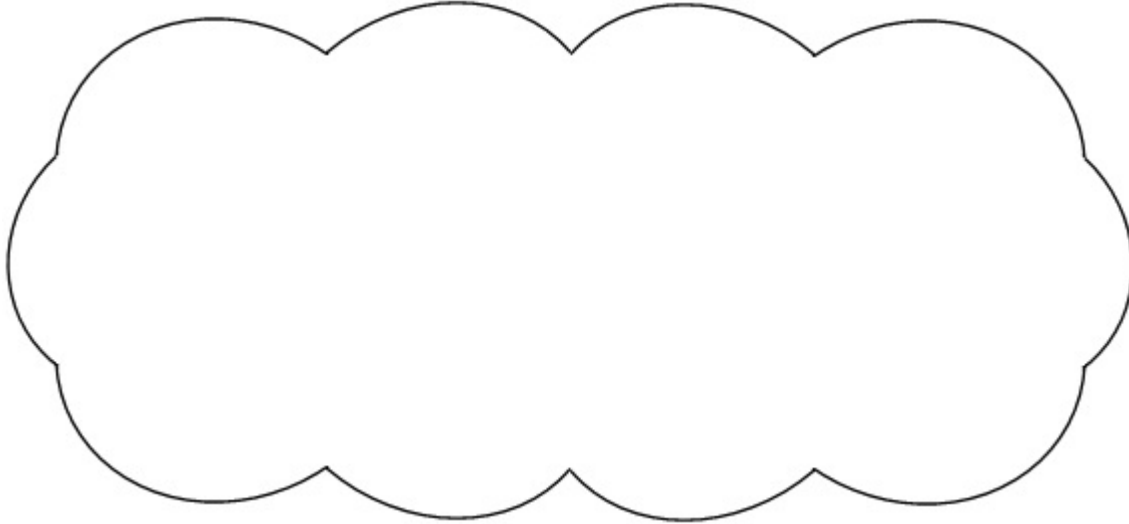
Circle the **prime** number.

95

89

87

Explain how you know the other numbers are **not** prime.



1 mark

10

Amina's bed is 190 cm in length and 91 cm in width.

She is making a **one-tenth** scale model of the bed.

What are the length and width of Amina's model?

length =

width =

1 mark

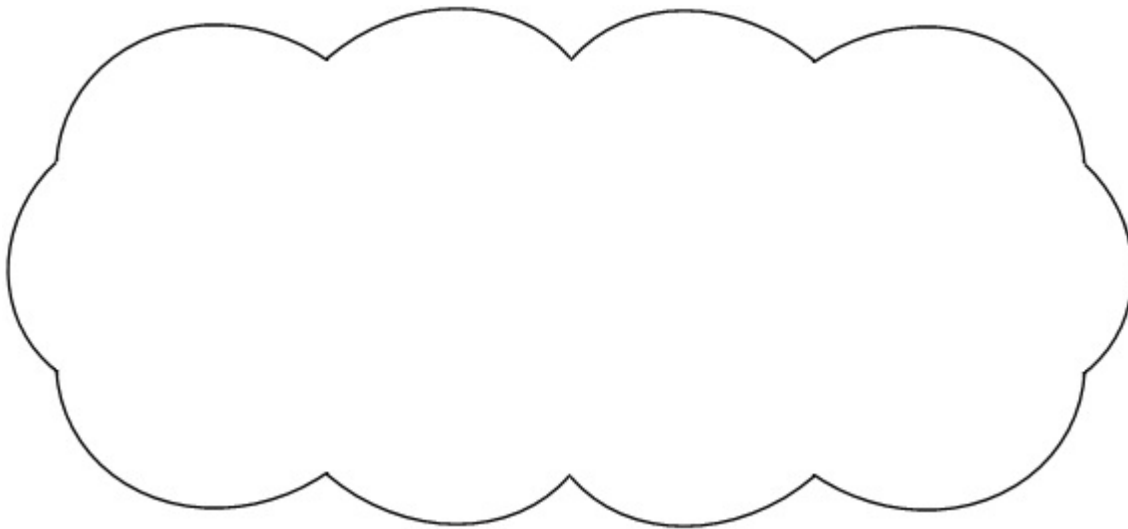
11

Kirsty says,



When you double the size of an acute angle, you always get an obtuse angle.

Explain why Kirsty is **not** correct.




1 mark

12

The numbers in this sequence **decrease** by the same amount each time.

303,604 302,604 301,604 300,604 ...

What is the next number in the sequence?



1 mark

Mark schemes

1

Award **TWO** marks for three correct numbers, as shown:

110 155 200 245 **290** **335**

Award **ONE** mark for:

- any **TWO** numbers correctly placed

OR

- if box 1 is correct, accept correct follow-through for box 3 from the incorrect value in box 2.

Do not accept misreads for this question.

Up to 2m

[2]

2

Both values correct, as shown:

$$\frac{3}{4} = \frac{9}{\boxed{12}} = \frac{\boxed{18}}{24}$$

*Both values must be correct for the award of **ONE** mark.*

[1]

3

Three boxes completed correctly as shown:

×	7	6
9	63	54
8	56	48

[1]

4

Award **ONE** mark for three correct answers, as shown:

4	×	8	=	32
×		×		
3	×	7	=	21
=		=		
12		56		

[1]

5

257

[1]

6

Award **ONE** mark for three boxes ticked or crossed correctly as shown:

£1.03 can be made with exactly 1 coin.



£1.03 can be made with exactly 2 coins.



£1.03 can be made with exactly 3 coins.



£1.03 can be made with exactly 4 coins.

*Accept alternative unambiguous indications.*

[1]

7

Diagram completed to show three triangles shaded, or equivalent, eg

*Accept inaccurate shading provided the intention is clear.*

[1]

8

Award **TWO** marks for the correct completion of the three numbers in the table, as shown:

	Round 39,476
to the nearest 10,000	40,000
to the nearest 1,000	39,000
to the nearest 100	39,500

If the answer is incorrect, award **ONE** mark for **any two** of the numbers rounded correctly.

Do not accept 9,000 or 500 for the second and third entries.

Up to 2m

[2]

9

Award **ONE** mark for a correct explanation of why the 95 **AND** 87 are **NOT** prime, e.g.

- 87 is divisible by 3 and/or 29 **AND** 95 is divisible by 5 and/or 19
- 87 is in the 3 times table **AND** 95 is in the 5 times table
- 95 is divisible by five because every number in the five times table ends in five or zero. 87 is divisible by three because 9 is in the three times table so is ninety. Ninety minus three is 87
- $8 + 7 = 15$ and 15 is divisible by 3 **AND** 95 is divisible by 5

No mark is awarded for circling '89' alone.

Both non-primes must be explained correctly for the award of the mark.

Do not accept vague or incomplete explanations, e.g.

- *The other 2 numbers have more than 2 factors (vague)*
- *87 is divisible by 3 (incomplete).*

Do not accept explanations which include incorrect mathematics or incorrect information that is relevant to the explanation, e.g.

- $3 \times 27 = 87$
- *89 has three factors*
- *no numbers go into 89*

[1]

10

Award **ONE** mark for two correct answers, as shown:

length = 19 cm

width = 9.1 cm

[1]

11

An explanation that includes a correct counter example, e.g.

- When you double 10° it is not obtuse
- $2 \times 27^\circ = 54^\circ$
- Double 45° is a right angle not obtuse

OR

An explanation that demonstrates where the statement in the question is not correct, e.g.

- If the acute angle is less than 45° then doubling it will be less than 90° , so it won't be obtuse (more than 90°).

Do not accept vague or incomplete explanations, e.g.

- *Sometimes it will be acute*
- *Some acute angles are half an obtuse angle, but not all*
- *When you double an acute angle, you get a right angle*

Do not accept explanations which include incorrect mathematics or incorrect information that is relevant to the explanation, e.g.

- $20^\circ\text{C} \times 2 = 40^\circ\text{C}$
- $20\% \times 2 = 40\%$

[1]

12

299,604

[1]