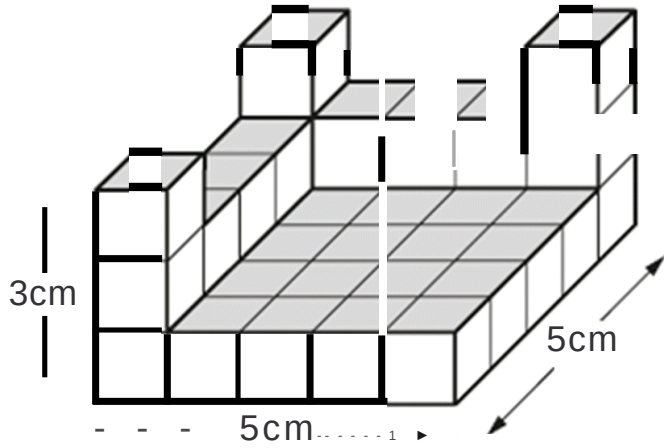
# Day 6 - Reasoning

**1** This shape is made of wooden centimetre cubes.




**Not actual size**

How many **more** centimetre cubes are needed to make it into a solid cuboid 3 cm tall, 5 cm long and 5 cm wide?

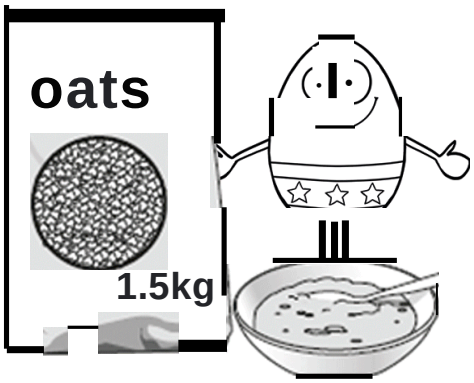
**2** On Saturday Lara read $\frac{2}{5}$ of her book.

On Sunday she read the **other** 90 pages to finish the book.

How many pages are there in Lara's book?

Show your method

**3** A packet contains 1.5 kg of oats.




Every day Maria uses 50 g of oats to make porridge.

How many days does the packet of oats last?

Show your method

days

**4** Leila knows that

**65 x 3 = 195**

Explain how she can **use this information** to find the answer to this multiplication:

**165 x 3**

.....

.....

.....

# Day 7 - Arithmetic

**1** **(35 x 9) + (15 x 9) =**

1 mark

**2** 9,000,800 - 7,999,990 =

1 mark

**3** 7 6 0 9 x 4 4

Show your method

2 marks

4 **28 - 5 x 3 =**

1 mark

5 **3500 x 440 =**

1 mark

6

| | | | | | | |
|---|---|---|---|---|---|---|
| **4** | 3 | **1** | 6 | 2 | 9 | **7** |

**Show your method**

2 marks

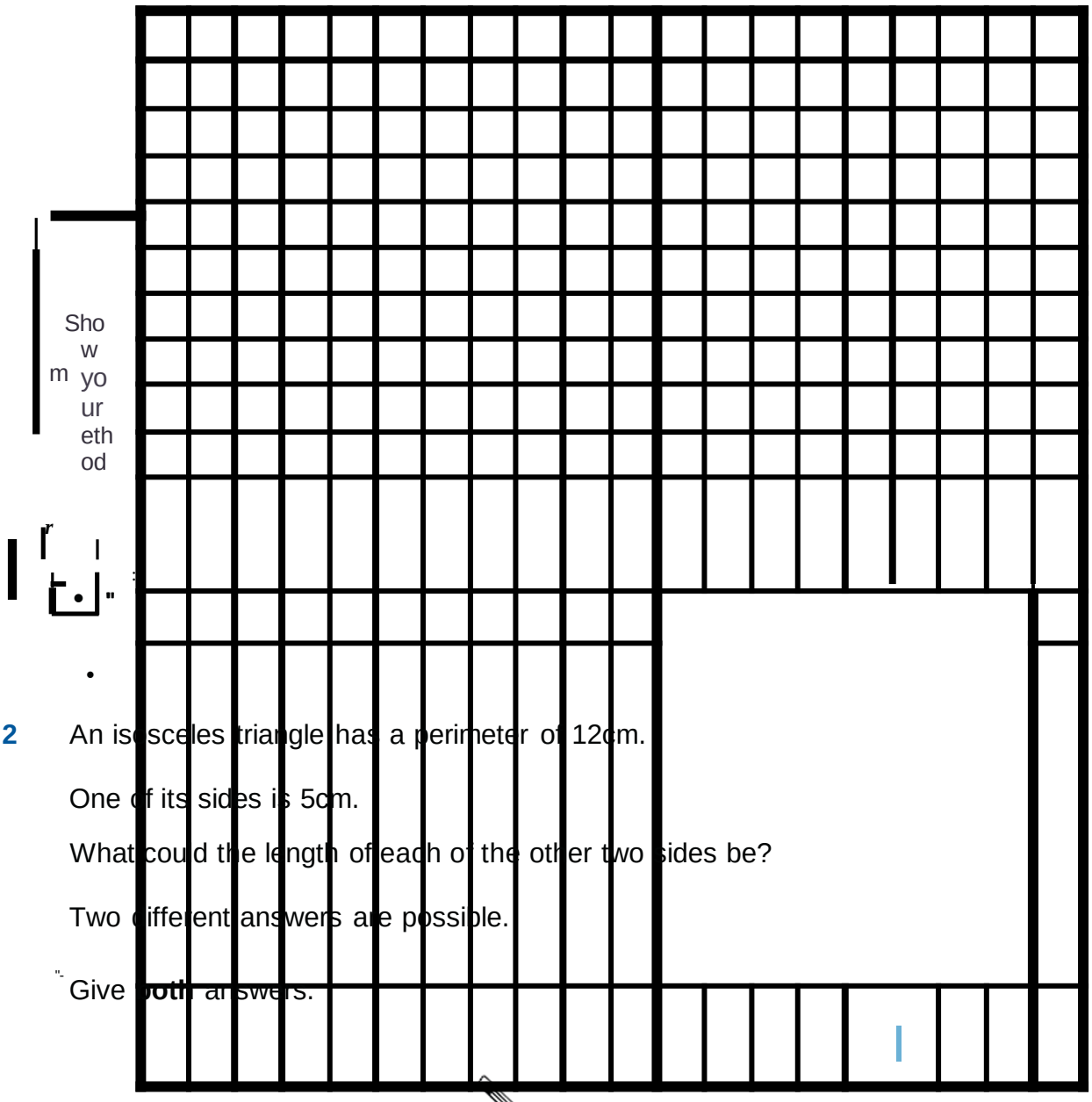
# Day 7 - Reasoning

**1** The area of a rugby pitch is 6,108 square metres.

A football pitch measures 112 metres long and 82 metres wide.

How much larger is the area of the football pitch than the area of the rugby pitch?

Show your method



**2** An isosceles triangle has a perimeter of 12cm.

One of its sides is 5cm.

What could the length of each of the other two sides be?

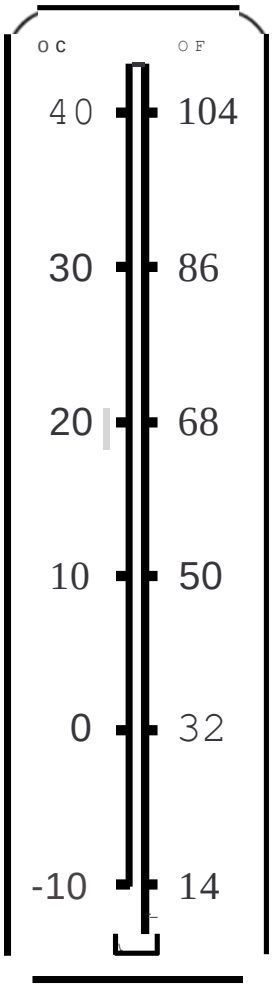
Two different answers are possible.

Give **both** answers.

_____ cm and _____ **cm**

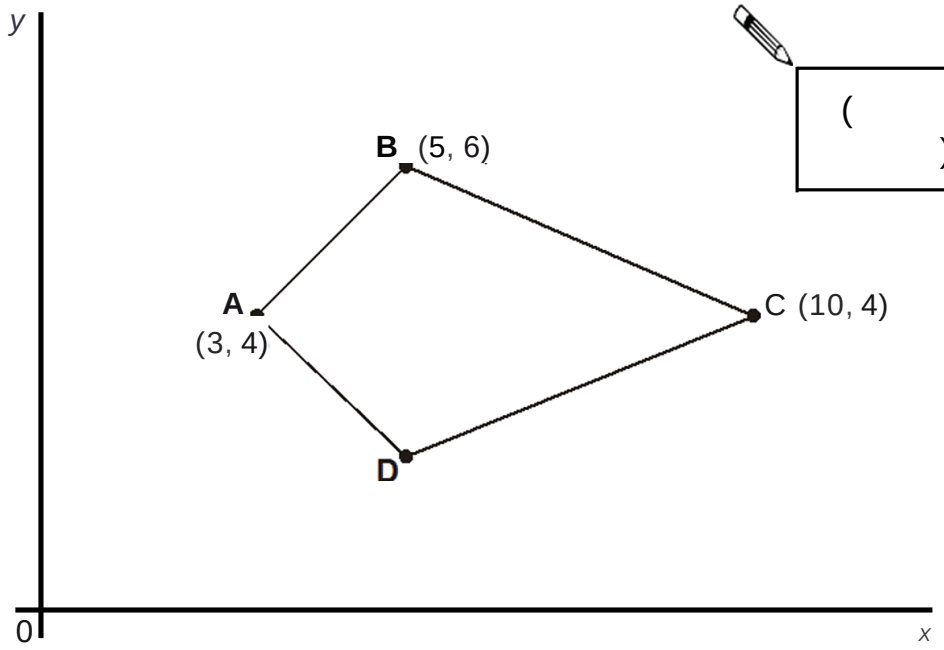
_____ cm and _____ **cm**

3 This thermometer shows temperatures in both °C and °F.




Work out what **25 °C** is in °F.

4 Here is a kite.

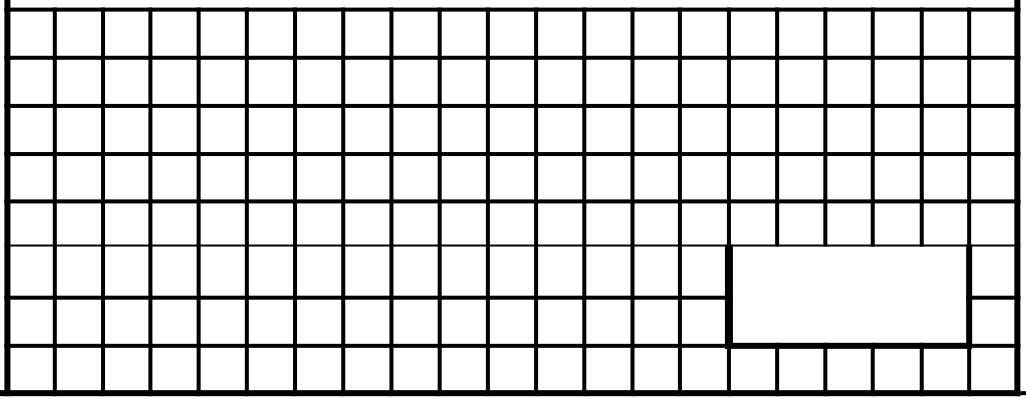



( , )

Write the coordinates of point **D.**

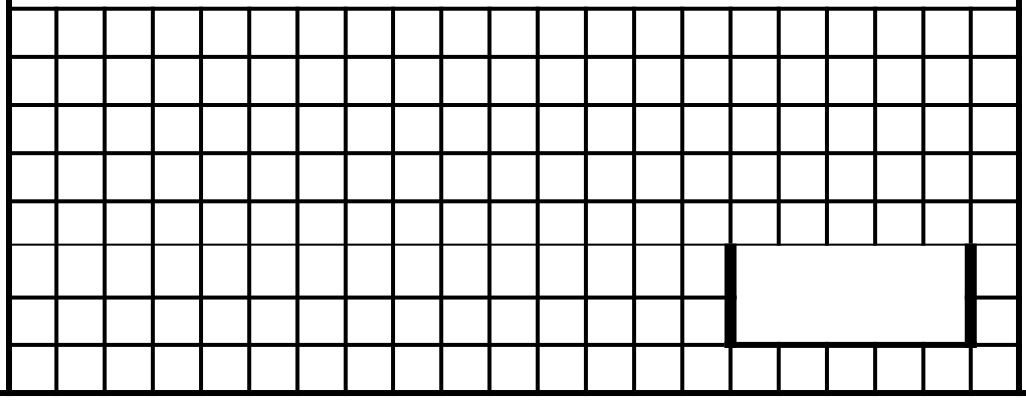
# Day 8 - Arithmetic

**1** $0.077 + 2 =$



1 mark

**2** 99% of 356 =

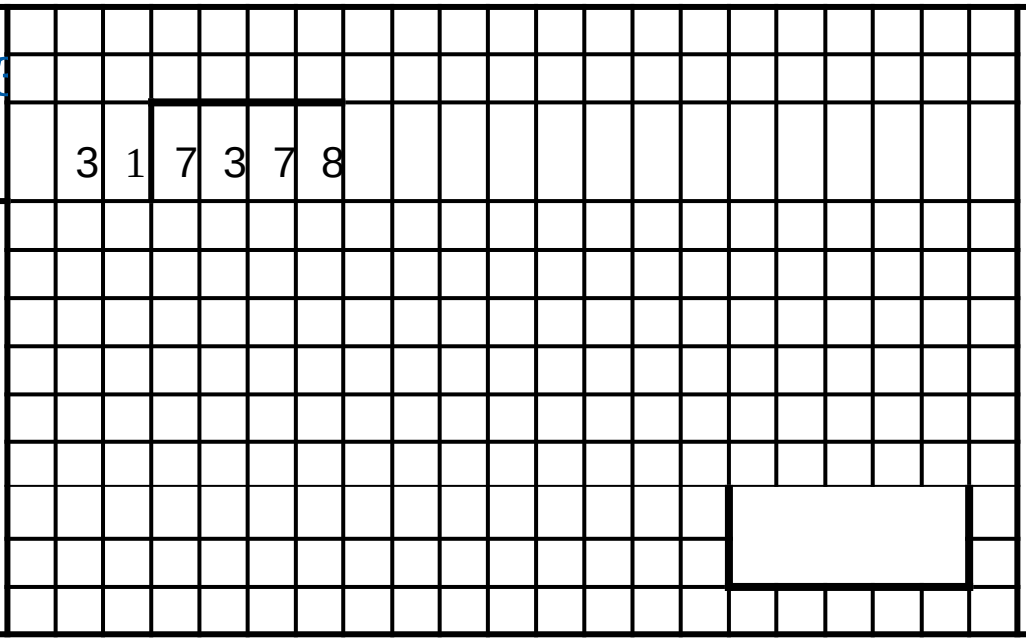


1 mark

**3**

3 1 7 3 7 8

Show your method



2 marks

**4** $\frac{4}{5} + \frac{5}{15} =$

1 mark

**5** $\frac{6}{7} \ldots 2 -$

1 mark

**6** $2\frac{1}{2} + \frac{1}{3} -$

1 mark

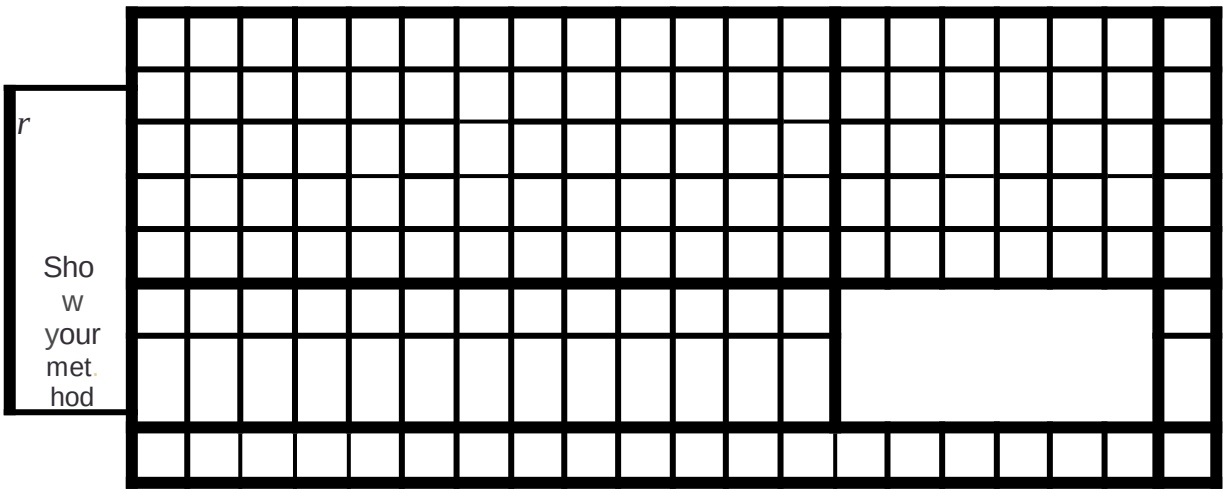
# Day 8 - Reasoning

**1** The numbers in this sequence increase by 30 each time.

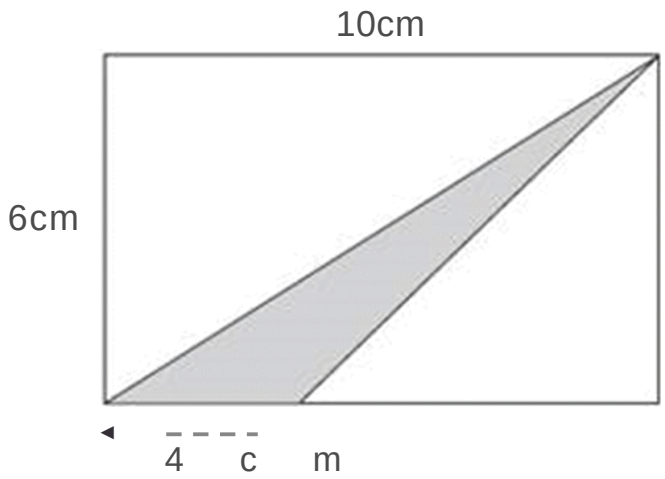
20 50 80 110 ...

The sequence continues in the same way.

Which number in the sequence will be **closest to 300?**




**2** The diagram shows a shaded triangle inside a rectangle.




**Not actual size**

What is the area of the shaded triangle?

**3** Liam thinks of a number.

He **multiplies the number by 5** and then **subtracts 60** from the result.

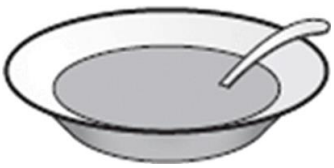
His answer equals the number he started with.

What was the number Liam started with?


**4** Alfie did a survey to find which soup was most popular.

The choices were:

- tomato
- chicken
- mushroom



A quarter of the children chose chicken soup.

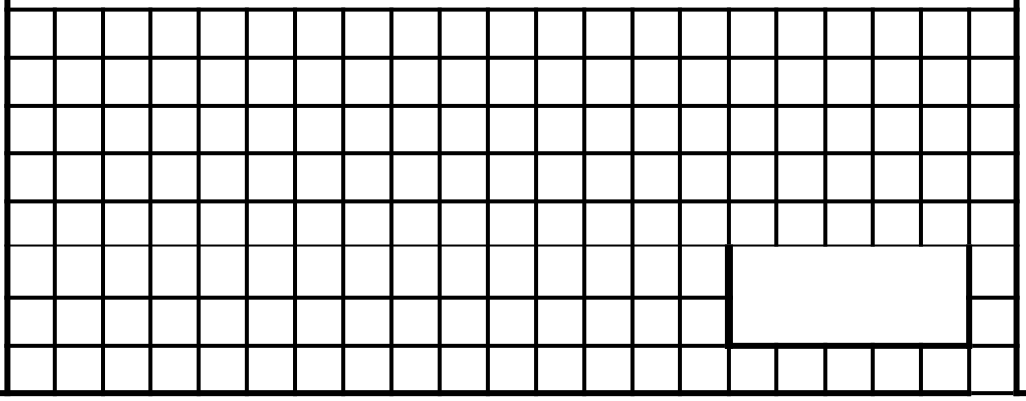
Four times as many children chose tomato soup as chose mushroom soup.

Alfie makes a pie chart to show this information.

What **angle** should he use for the children who chose tomato soup?

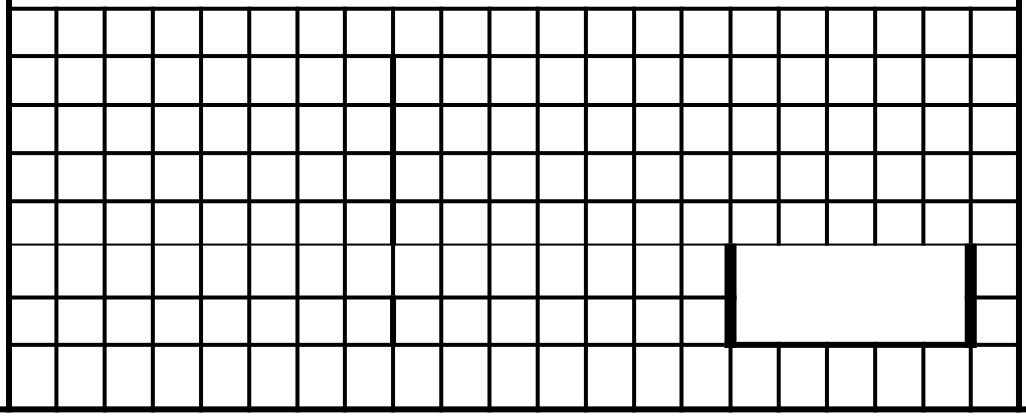
# Day 9 - Arithmetic

1 $345 \times 5 \times 4 =$



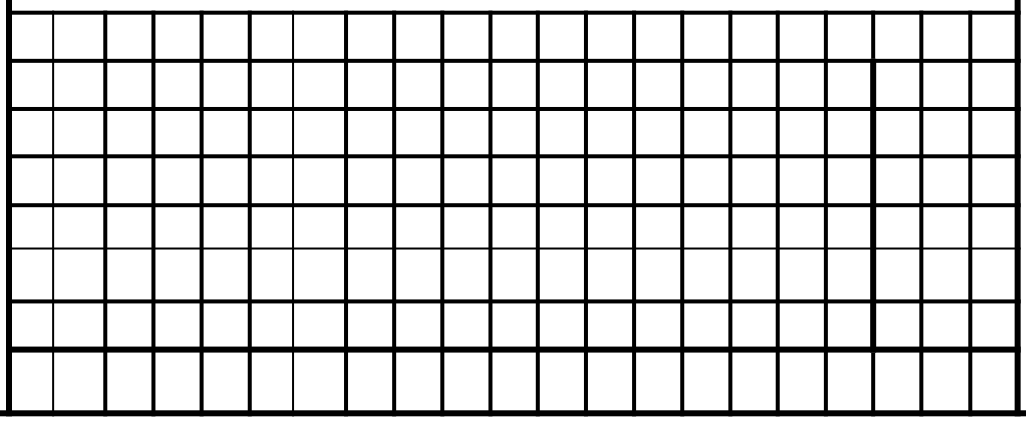
1 mark

2 $3 - 7 \times 9 =$



1 mark

3 $\square = 1{,}320 + 11$



1 mark

4 90% of 2,000 =

1 mark

5 3 2 5 7 9 2

Show your method

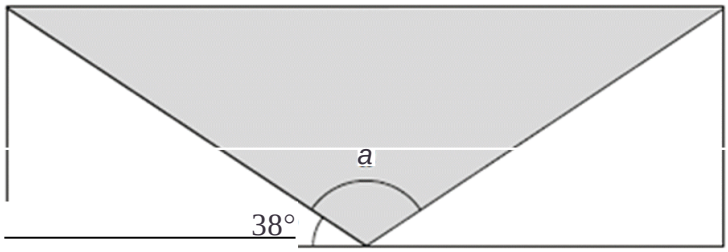
2 marks

6 $\frac{3}{4} + \frac{3}{12} =$

1 mark

# Day 9 - Reasoning

1 A shaded isosceles triangle is drawn inside a rectangle.




Not to scale

Calculate the size of angle *a*.

Sho\
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y
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meth
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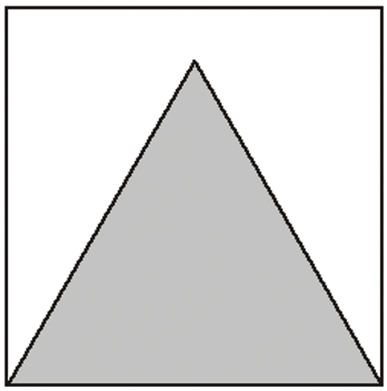
2 Three-quarters of a number is 48

What is the number?

**3** Here is an equilateral triangle inside a square.



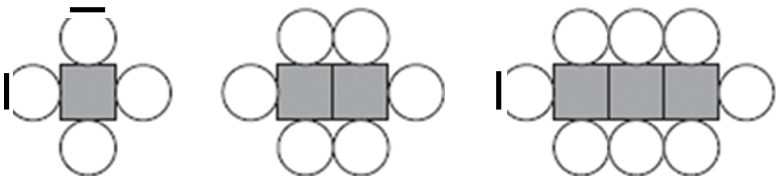
**Not actual size**

The perimeter of the triangle is 48 centimetres.

What is the perimeter of the **square?**

**4** Here is a sequence of shapes.

Each time a square is added to a shape, two more circles are added.

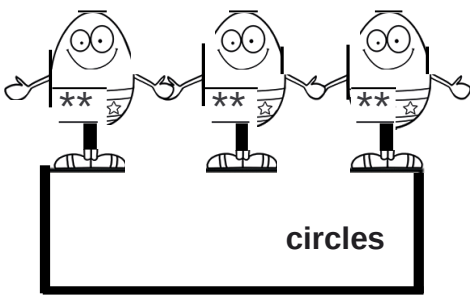


| number of squares, $s$ | 1 | 2 | 3 |
|---|---|---|---|
| number of circles, $c$ | 4 | 6 | 8 |

The sequence of shapes continues.

The formula for the sequence is $c = 2s + 2$

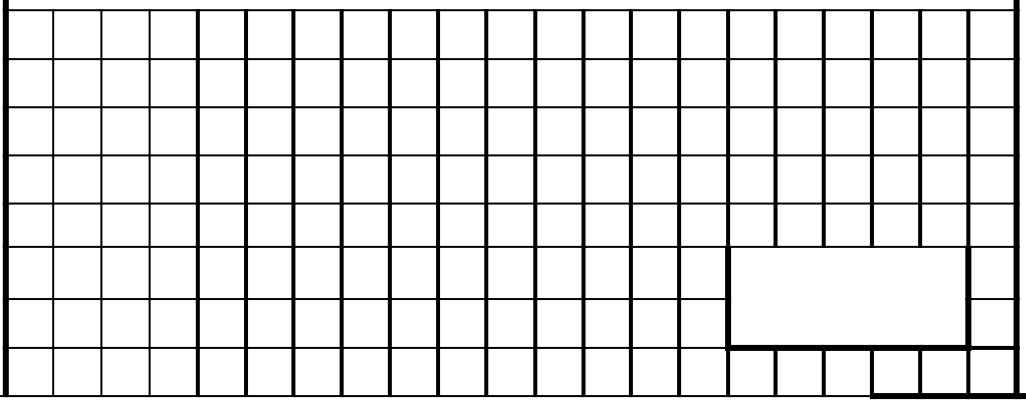
Calculate the number of circles when the number of squares in a shape is **150.**




How many squares are there in a shape that has **100** circles?

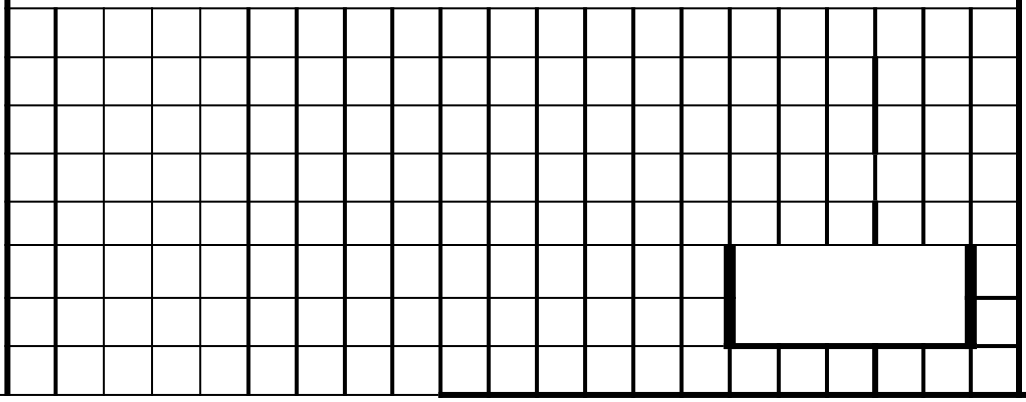
# Day 10 - Arithmetic

1 -19 + 3.078 =



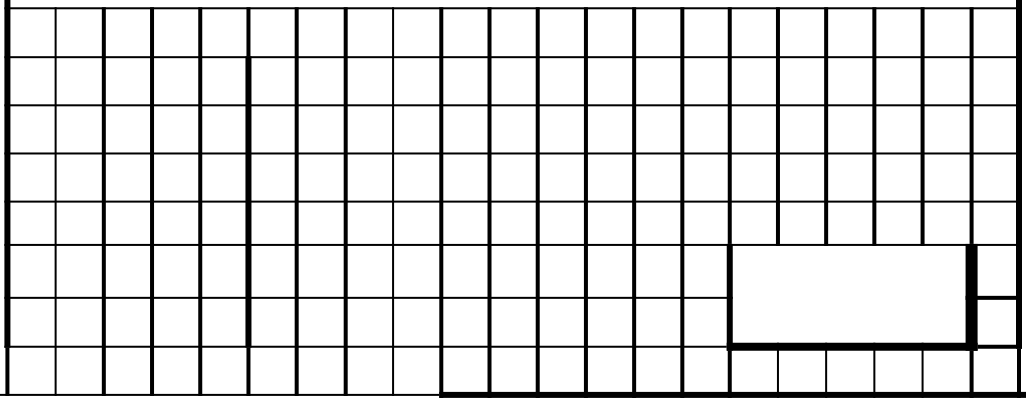
1 mark

2 3 x 72 + 7 x 72 =



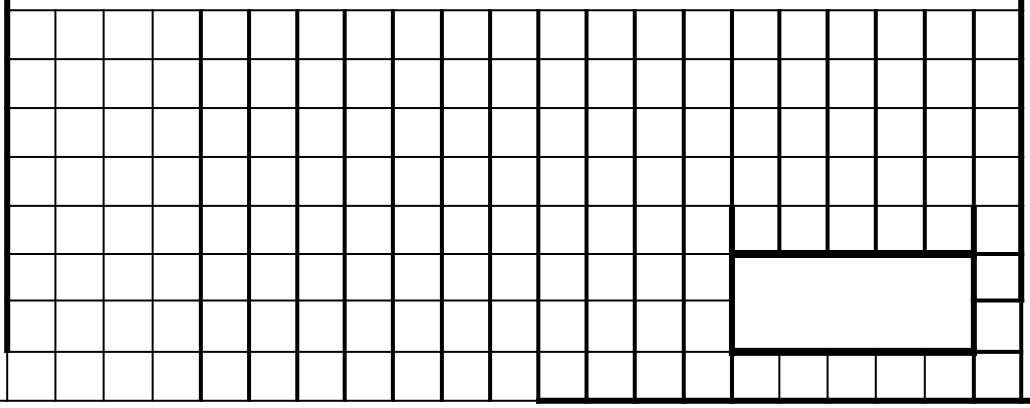
1 mark

3 1.45 x 7



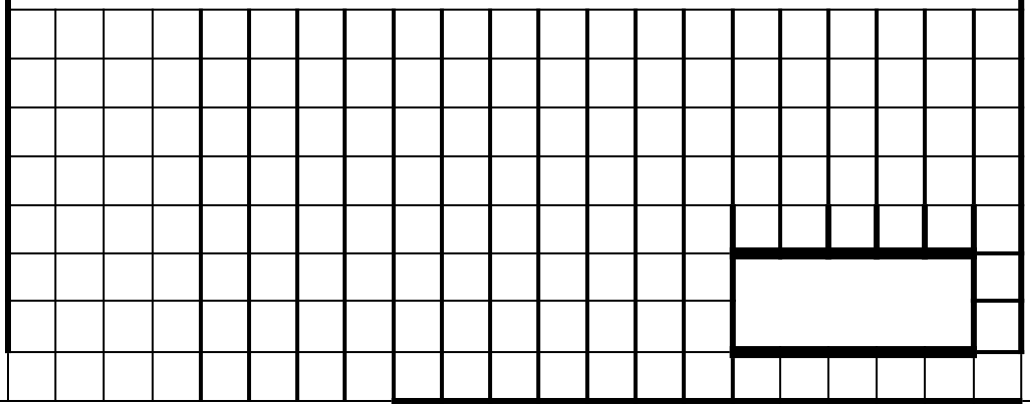
1 mark

4 $\frac{4}{6} - \frac{1}{73} =$



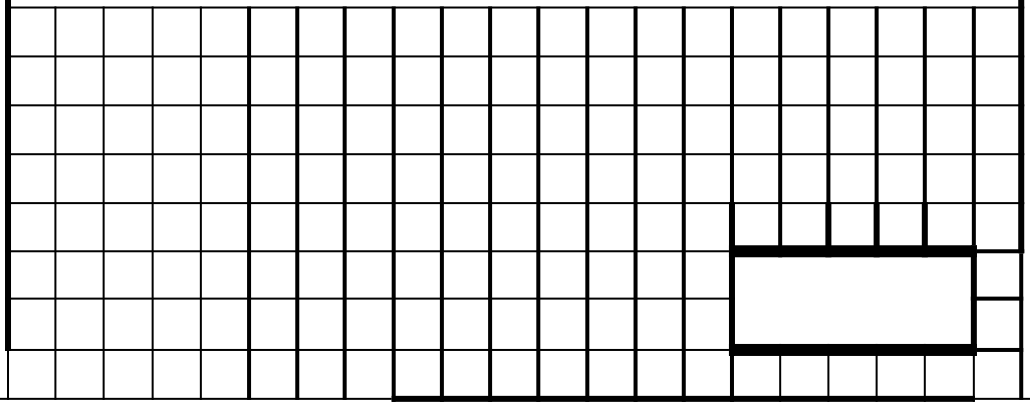
1 mark

5 **2,598** x **75** =



1 mark

6 20.1 + 1000 =

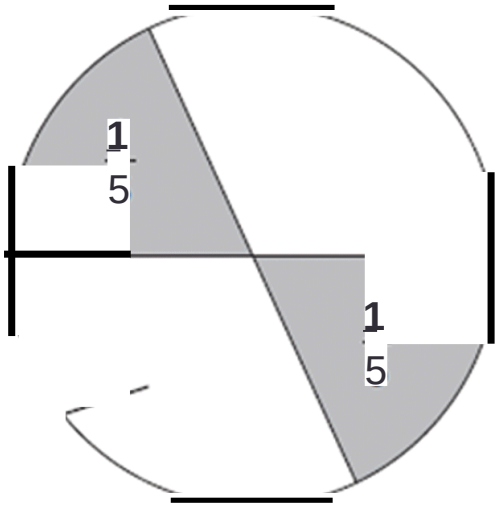


1 mark

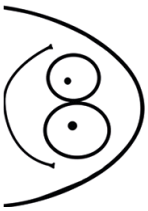
# Day 10 - Reasoning

**1** In this circle, each shaded part is $\frac{1}{5}$ of the area of the circle.

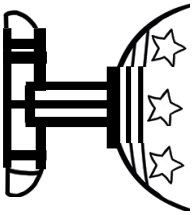
The two white parts have equal areas.




**Not drawn accurately**



?



What fraction of the circle is one of the white areas?

**2** Write in the missing number.

50 ÷ ☐ = 2.5

3 20o/o of the children in a sports club play tennis.

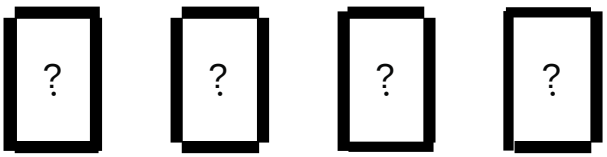
25o/o of the children who play tennis **also** play rounders.

There are 8 children in the club who play **both** tennis and rounders.

How many children are there in the sports club **altogether?**

4 Debbie has a pack of cards numbered from 1 to 20

She picks four different number cards.




Exactly three of the four numbers are multiples of 5

Exactly three of the four numbers are even numbers.

All four of the numbers add up to less than 40

Write what the numbers could be.