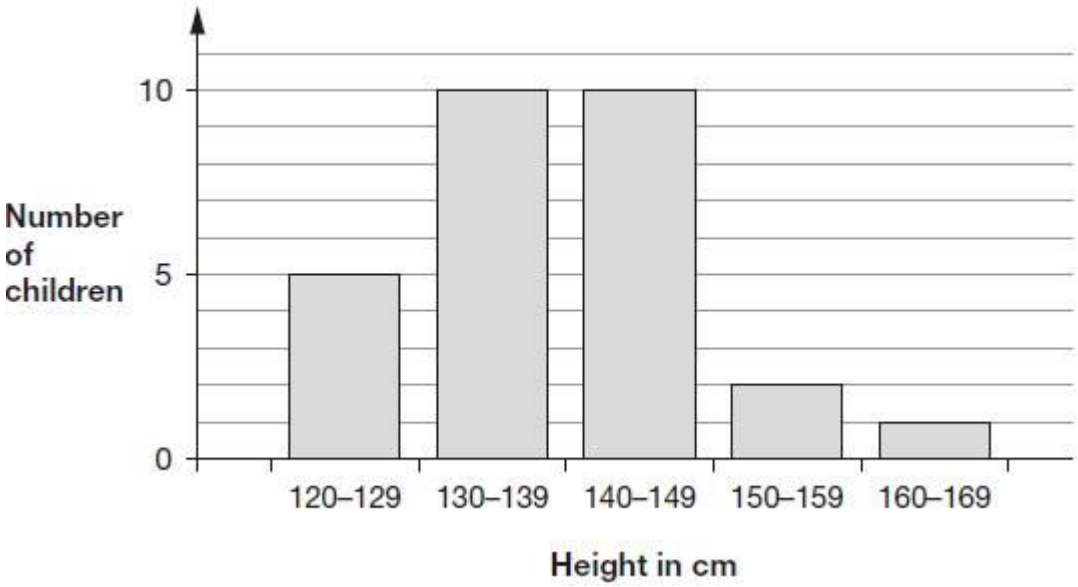
Q1.

The graph shows the heights of 28 children in Alfie's class, to the nearest centimetre.



Alfie is 153 cm tall.

He says,

'Only one person in my class is taller than I am.'

Emma says,

'You can't tell this from the graph.'

Explain why Emma is correct.

1 mark

Q2.

Solve this equation.

$$7y + 12 = 5y + 40$$

Show your method

$y =$

2 marks

Q3.

n and p stand for two numbers.

n is a multiple of 5
p is a multiple of 6

$$\frac{n}{p} = \frac{2}{3}$$

Find numbers that n and p stand for.

Show your method

$n =$

$p =$

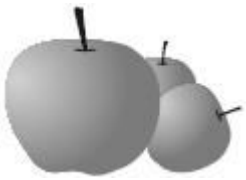
2 marks

Q4.

Three apples have a **mean** (average) mass of 100 grams.

The largest apple is removed.

The **mean** mass of the remaining two apples is 70 grams.



What is the mass of the largest apple?

Show your method

g

2 marks

Q5.

Write the missing number.

$$12.5 \div \square = 7.5 \div 1.5$$

1 mark

Q6.

$$\frac{6}{5} \qquad \frac{3}{5} \qquad \frac{3}{4}$$

Write these fractions in order, starting with the **smallest**.

$\square$ $\square$ $\square$

smallest

1 mark

Q7.

There are 28 pupils in a class.

The teacher has 8 litres of orange juice.

She pours 225 millilitres of orange juice for every pupil.

How much orange juice is left over?

Show your method

3 marks

Q8.

Last year, Jacob went to four concerts.

Three of his tickets cost £5 each.

The other ticket cost £7

What was the **mean** cost of the tickets?

Show your method

£

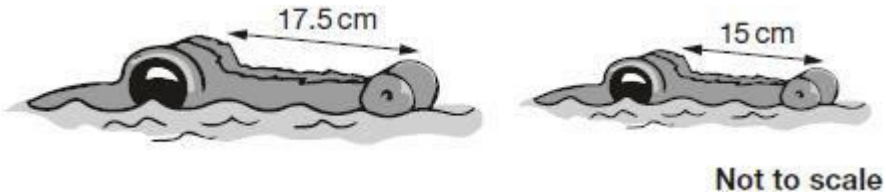
2 marks

Q9.

The length of an alligator can be estimated by:

- measuring the distance from its eyes to its nose
- then multiplying that distance by 12

What is the **difference** in the estimated lengths of these two alligators?



Show your method

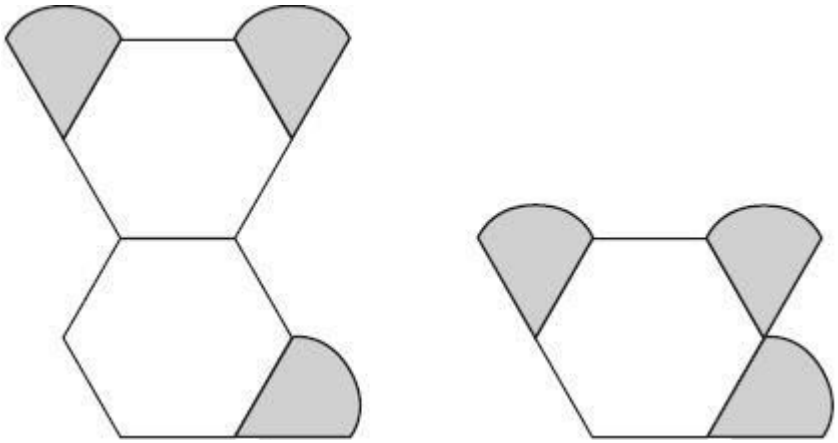
cm

2 marks

Q10.

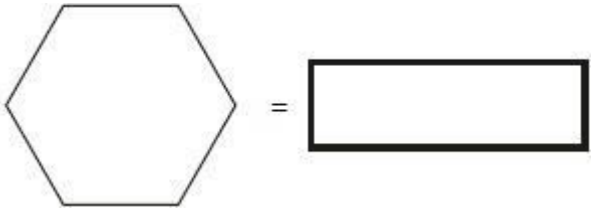
Amina is making designs with two different shapes.

She gives each shape a value.

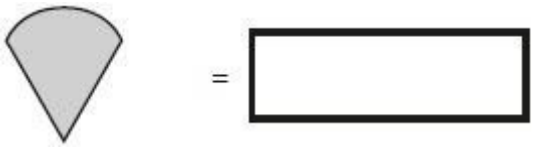


Total value is 147 Total value is 111

Calculate the value of each shape.



1 mark

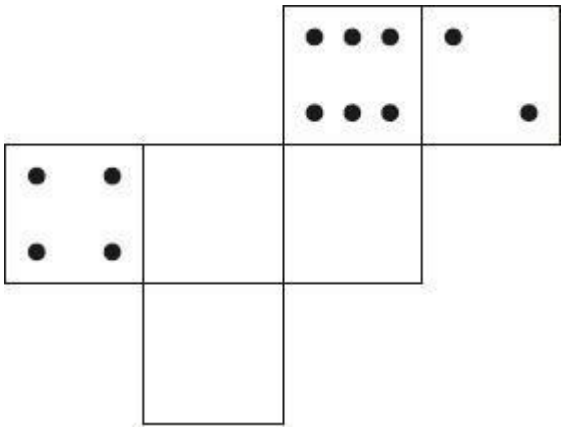


1 mark

Q11.

On a dice, the sum of the dots on opposite faces is always 7

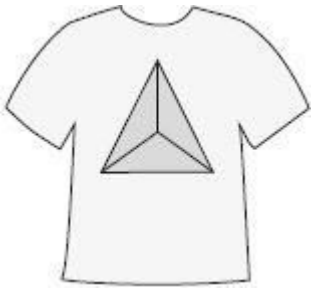
Draw dots on the three empty faces of the net so that it could fold up to make a dice.



1 mark

Q12.

A shop prints designs on T-shirts.



They use this formula to work out the price for printing a design.

price = 60p × number of colours + £1.25

What is the price for printing a design that has **3** colours in it?

£

1 mark

Amina has **£5** to spend on printing a design.

What is the greatest number of **colours** she can have in the design?

Show your method

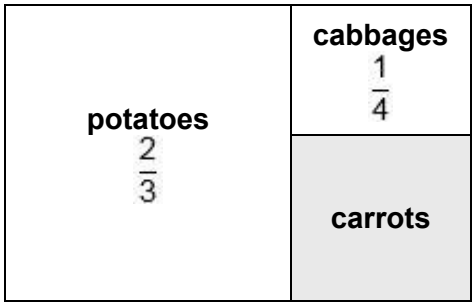
colours

2 marks

Q13.

This is a diagram of a vegetable garden.

It shows the fractions of the garden planted with potatoes and cabbages.



Not to scale

The remaining area is planted with carrots.

What **fraction** of the garden is planted with carrots?

Show your method

2 marks

Q14.

Jack finished a sponsored run in 53 minutes 25 seconds.

Ally finished 3 minutes 50 seconds **after** Jack.

How long did Ally take?

min	**sec**

1 mark

Layla finished the run 8 minutes 45 seconds **before** Jack.

How long did Layla take?

min	**sec**

1 mark

Q15.

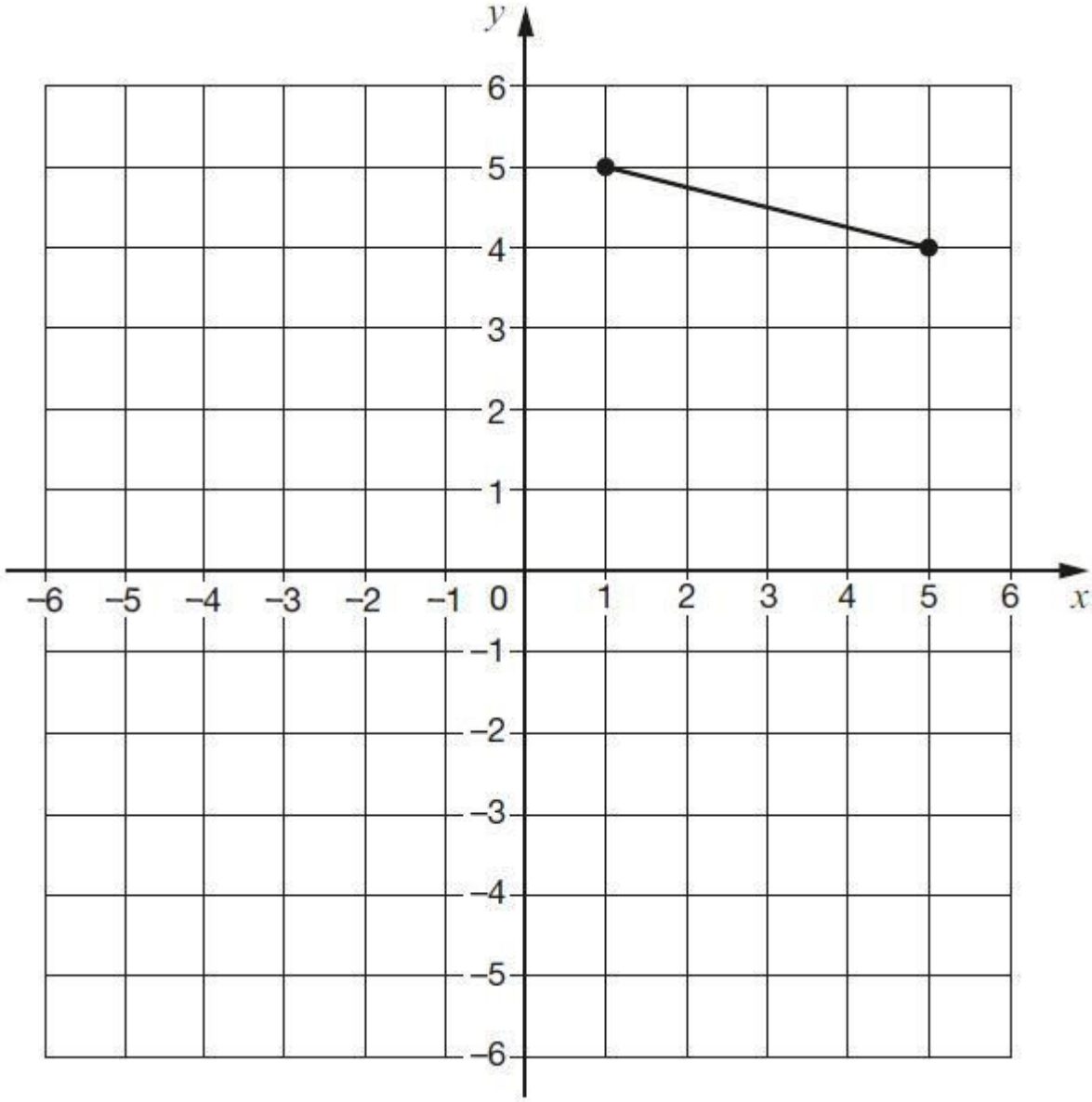
The vertices of a quadrilateral have these coordinates.

(1, 5) (5, 4) (1, −3) (−3, 4)

One side of the quadrilateral has been drawn on the grid.

Complete the quadrilateral.

Use a ruler.



1 mark