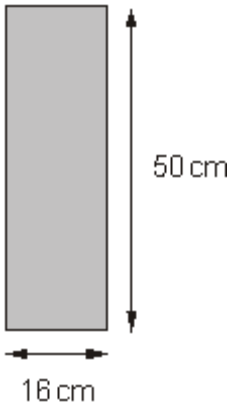
Hot Reasoning Week 6 Year 5

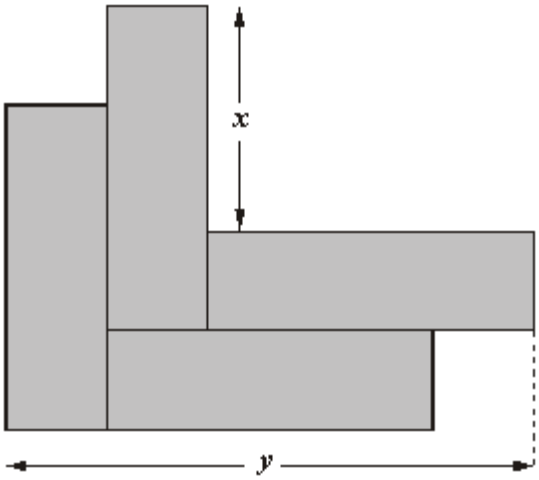
Q1. Kate has some rectangles.

They each measure 16 centimetres by 50 centimetres.



Not actual size

She makes this design with four of the rectangles.



Work out the lengths x and y.

x = ____ **cm**

1 mark

y = ____ **cm**

1 mark

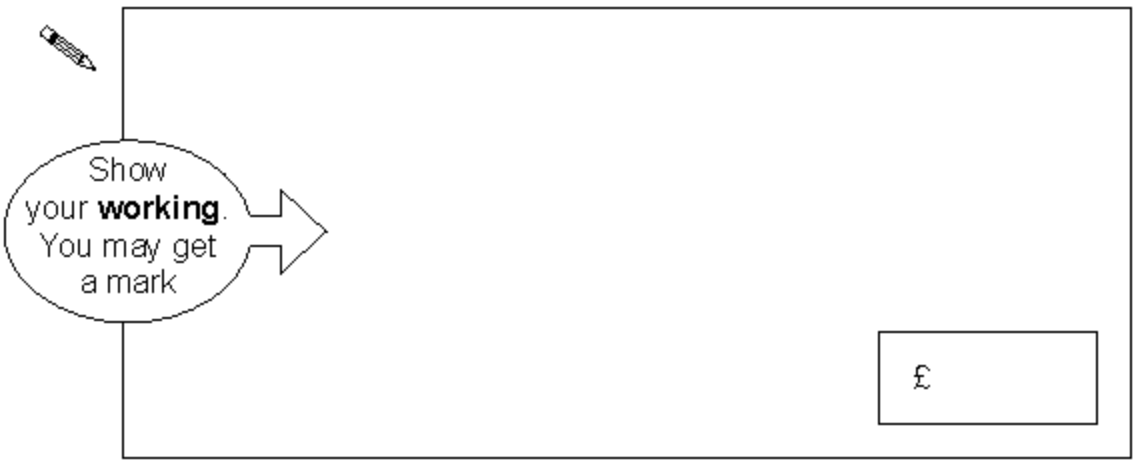
Q2.

The cost for using a minibus is £1.36 for each kilometre.

8 friends go on a 114 kilometre journey.

They share the cost equally.

How much does each person pay?



2 marks

Q3. A shop sells notebooks and pens.

Hassan bought **a notebook** and **a pen**.

He paid **£1.10**

Kate bought **a notebook** and **2 pens**.

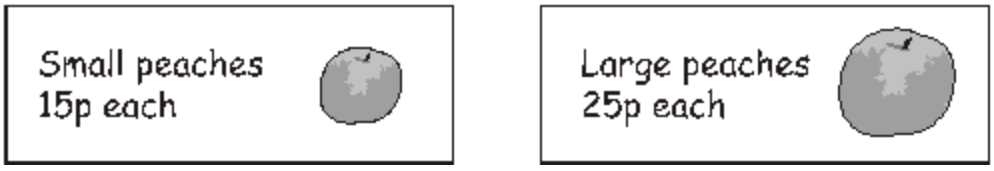
She paid **£1.45**

Calculate the cost of **a notebook**.

Show your **working**. You may get a mark

2 marks

Q4.



Emily has £5 to spend on peaches.

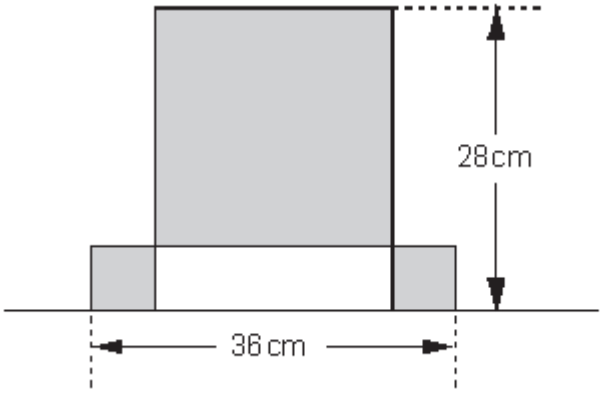
She decides to buy only small peaches or only large peaches.

How many **more** small peaches than large peaches can she buy for £5?

2 marks

Q5. This design has **one large square** and **two identical small squares**.

The design measures 36 centimetres by 28 centimetres.



Not actual size

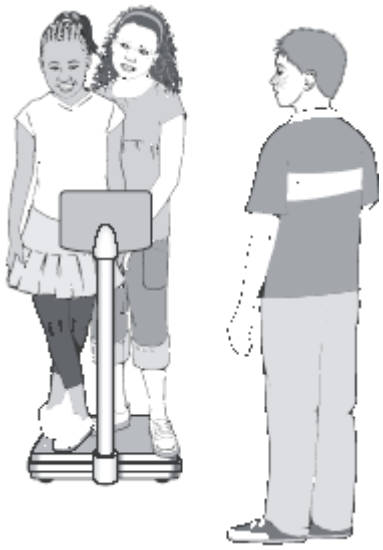
Calculate the length of a side of the **large** square.

Show your **working**. You may get a mark.

cm

2 marks

Q6. Sarah, Amy and Liam stand on some weighing scales two at a time.



Here are the measurements:

Sarah and Amy **70kg**

Sarah and Liam **80kg**

Liam and Amy **80kg**

How much does Liam weigh?

Show your **working**. You may get a mark

kg

2 marks

ANSWERS!!

M1. (a) 34

1

(b) 82

1

M2. Award **TWO** marks for the correct answer of £19.38

If the answer is incorrect, award **ONE** mark for evidence of appropriate method, eg

114 × 1.36 ÷ 8

OR

114 × 136 ÷ 8

*Accept for **ONE** mark £1938 **OR** £1938p as evidence of appropriate working.*

*Answer need not be obtained for the award of **ONE** mark.*

Up to 2

M3. Award **TWO** marks for the correct answer of 75p

If the answer is incorrect, award **ONE** mark for evidence of appropriate working, eg

£1.45 – £1.10 = 35p

£1.10 – 35p = wrong answer

OR

£1.10 × 2 = £2.20

£2.20 – £1.45 = wrong answer

*Accept for **ONE** mark 0.75p **OR** £75 as evidence of appropriate working.*

*Working must be carried through to reach an answer for the award of **ONE** mark.*

Up to 2 (U1)

M4. Award **TWO** marks for the correct answer of 13

If the answer is incorrect, award **ONE** mark for evidence of appropriate method, eg

500 ÷ 15 = 33

500 ÷ 25 = 20

33 – 20

*Award **ONE** mark for an answer of 13 $\frac{1}{3}$ **OR** 13. ˙3 **OR** 13.3 **OR** 13.33, etc.*

*Award **ONE** mark for sight of 20 **AND** 33 with no evidence of an incorrect method.*

*Answer need not be obtained for the award of **ONE** mark.*

Up to 2

M5. Award **TWO** marks for the correct answer of 20

If the answer is incorrect, award **ONE** mark for evidence of appropriate working, eg

Small square = 36 – 28 = 8

Large square = 28 – 8

= wrong answer

*Working must be carried through to reach an answer for the award of **ONE** mark.*

Up to 2 (U1)

M6. Award **TWO** marks for the correct answer of 45

If the answer is incorrect, award **ONE** mark for evidence of appropriate method, eg:

- 70 ÷ 2 = 35
  80 – 35

OR

- 80 – 70 = 10
  70 ÷ 2 = 35
  35 + 10

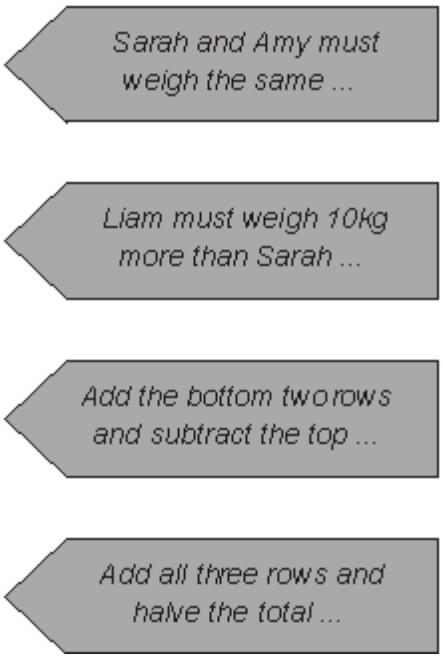
OR

- 80 + 80 = 160
  160 – 70 = 90
  90 ÷ 2

OR

- 80 + 80 + 70 = 230
  230 ÷ 2 = 115
  115 – 70

*Answer need not be obtained for the award of **ONE** mark.*


Sarah and Amy must weigh the same ...
Liam must weigh 10kg more than Sarah ...
Add the bottom two rows and subtract the top ...
Add all three rows and halve the total ...

Up to 2 (U1)