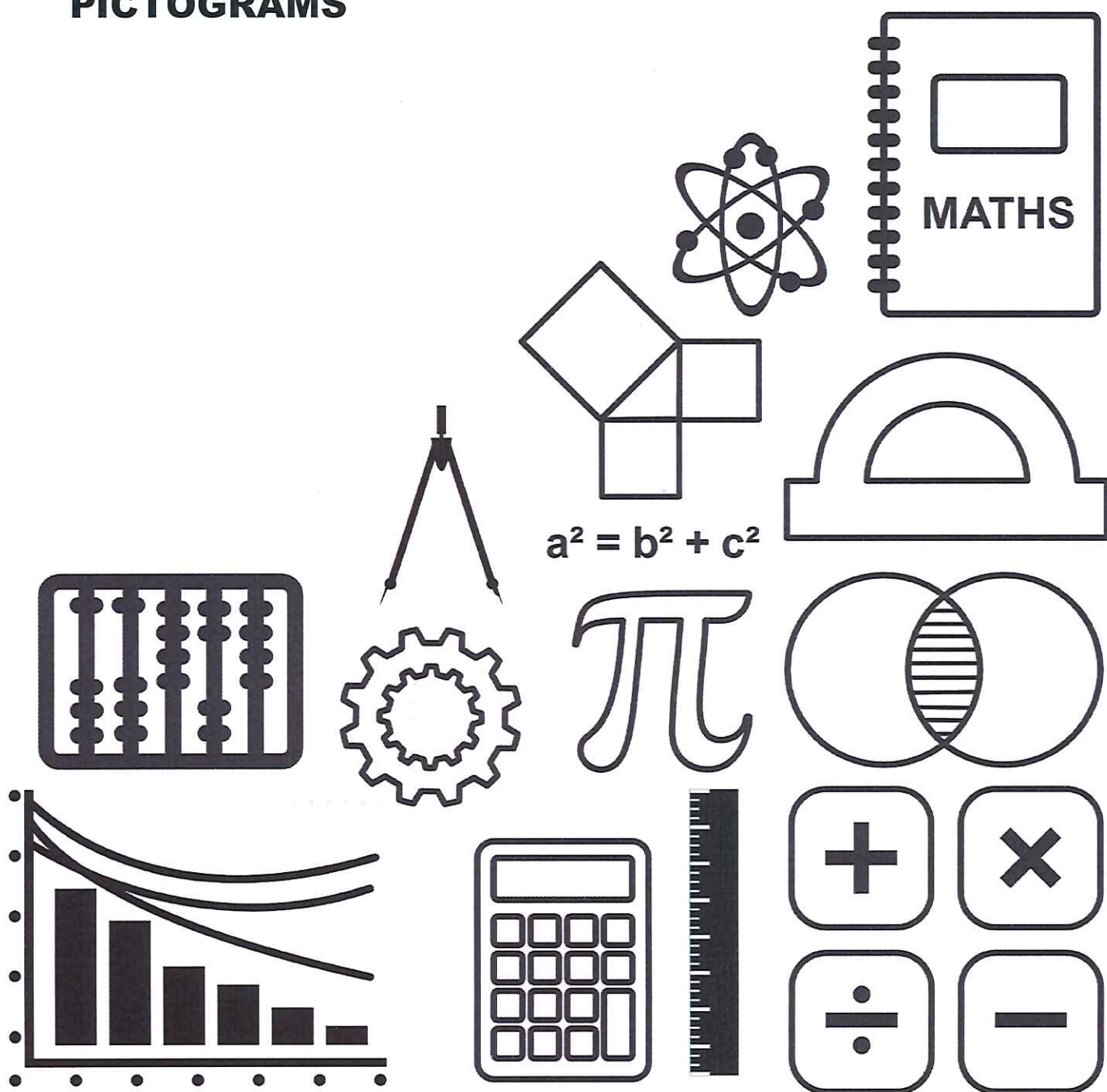


SOLUTIONS

GCSE TOPIC BOOKLET PICTOGRAMS

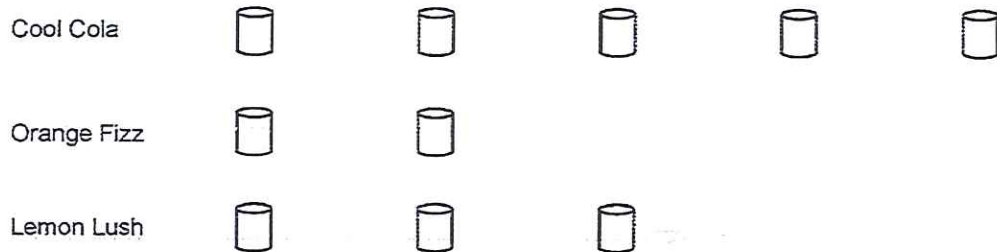


1.

- (a) Jo drew a pictogram to show information about the drinks sold from a vending machine on a Monday afternoon.

The key for the pictogram is incomplete.

KEY  = ?



Jo knew that 80 drinks were sold in total that afternoon.

How many drinks of Lemon Lush were sold that afternoon?

[2]

$1 \text{ can} = 8$ (because $10 \times 8 = 80$)

So Lemon Lush = $3 \times 8 = 24$

- (b) On Tuesday, Jo recorded the sales of drinks that afternoon.

Drink	Number of drinks sold
Cool Cola	24
Orange Fizz	18
Lemon Lush	7

Explain why the key that Jo used for Monday's sales of drinks would not be suitable for him to clearly represent Tuesday's sales of drinks in a pictogram. [1]

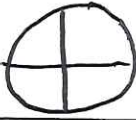
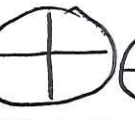
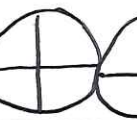
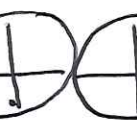
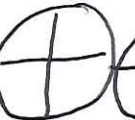
Because Lemon Lush sold 7, and if $1 \text{ can} = 8$ it will be awkward to draw the images, because 7 is not a multiple of 8.

- (c) A different symbol is to be used to represent 4 drinks in a new key.

Use this new key to draw a pictogram to represent the drinks sold on Tuesday.

[3]

New Key:  = 4 drinks

Cool Cola	     
Orange Fizz	    
Lemon Lush	 

Try and make all of the diagrams the same size.

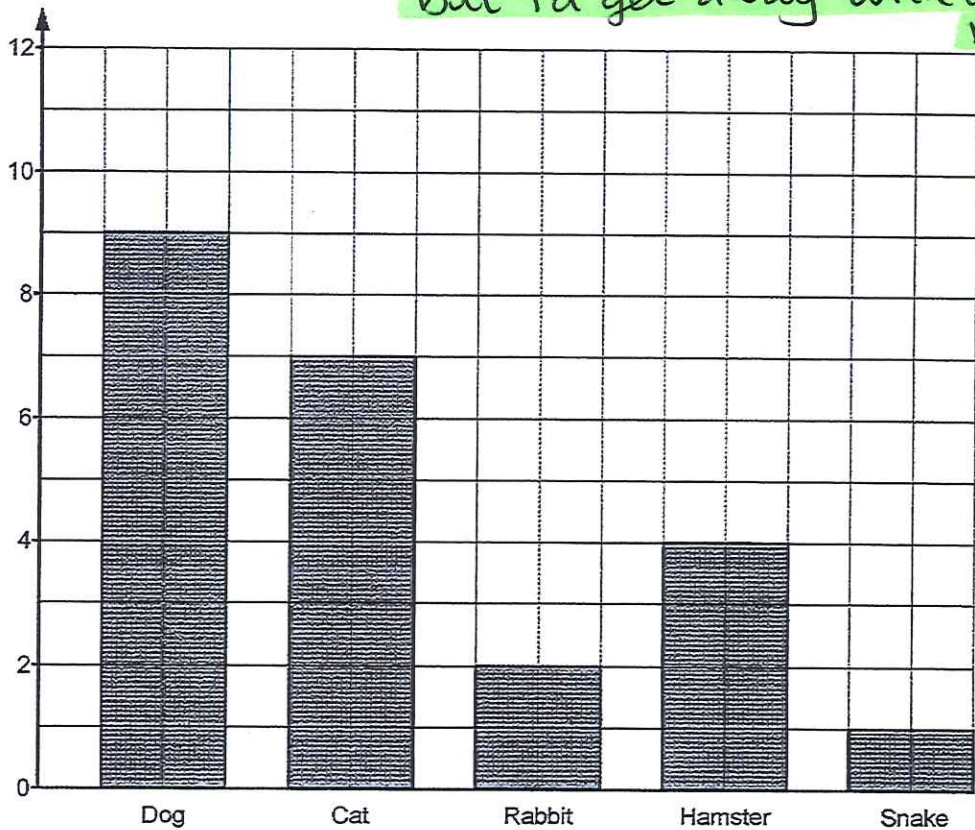
2.

- (a) The bar chart below shows the pets that a vet examined in one morning.

Mine are not fantastic, but I'd get away with it

BUT no noise!

Frequency



(i) How many cats did the vet examine?

7

[1]

(ii) How many pets did the vet examine in total?

$$9 + 7 + 2 + 4 + 1 = 23$$

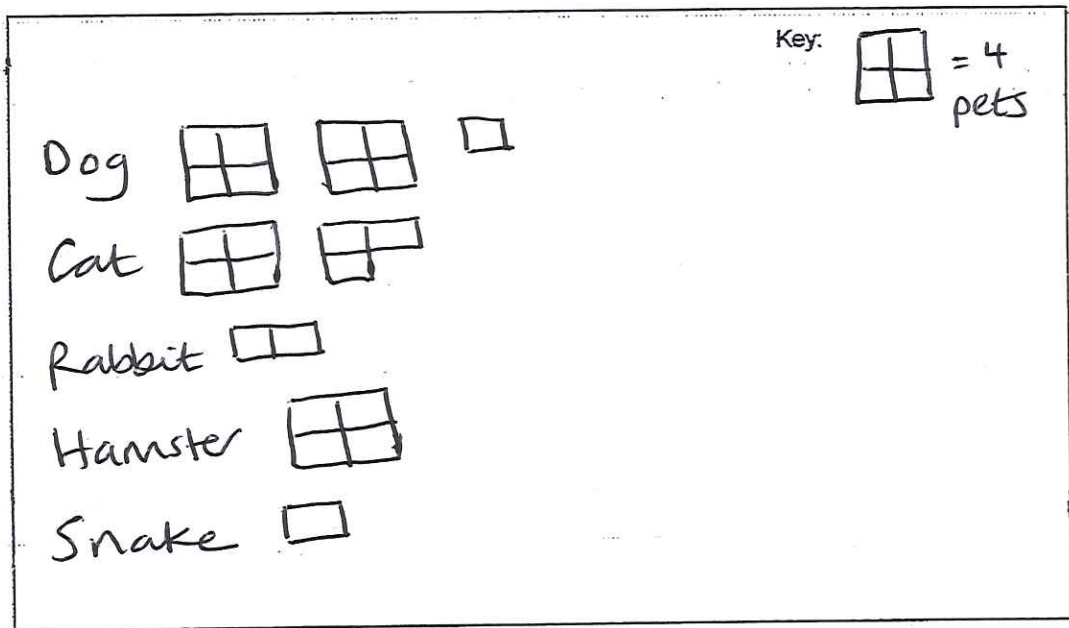
[2]

(iii) Which type of pet was examined most often?

Dog

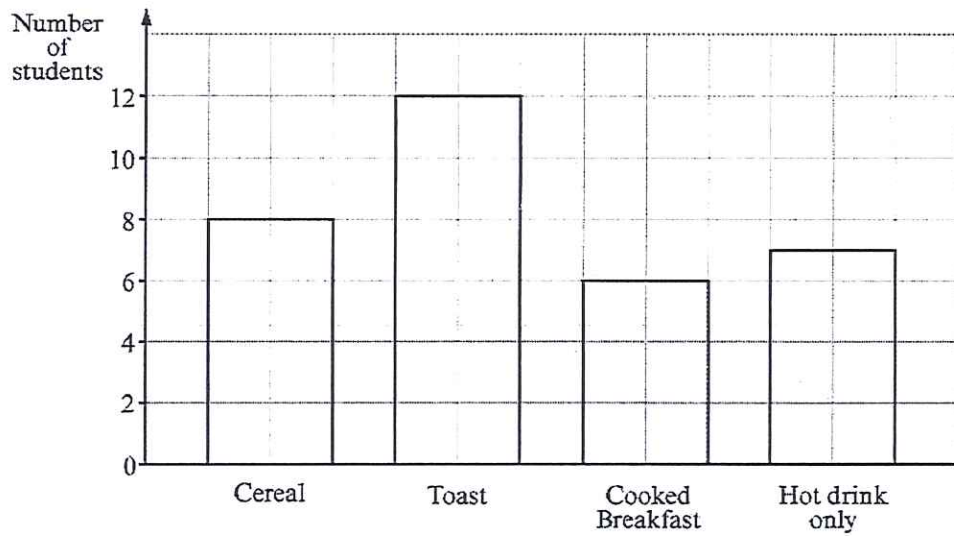
[1]

(iv) The vet wishes to display the information on the previous page as a pictogram. In the space below, draw a pictogram to represent the number of each type of pet the vet examined that morning. [4]



3.

The bar chart shows the breakfast choices of a group of students the morning after their last examination. Each student had only one of the choices for breakfast.



(a) How many students ate a cooked breakfast?

6

[1]

(b) How many students were there altogether?

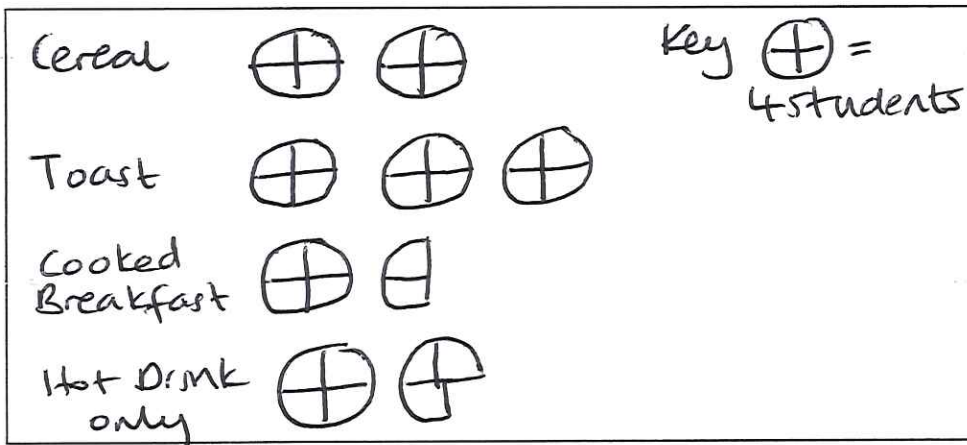
$$8 + 12 + 6 + 7 = \underline{33}$$

[2]

(c) The students want to display this information as a pictogram. In the space below, draw a pictogram to represent the data given in the bar chart.

Use $\oplus$ to represent 4 students.

[3]

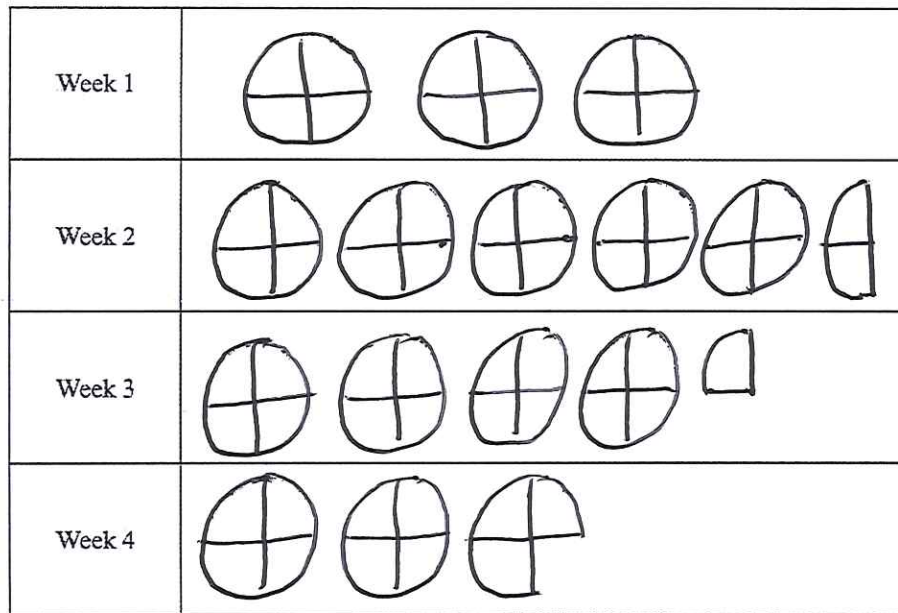


4.

- (a) The table shows the number of crates of oranges sold by a wholesaler in each of four weeks.

Week number	1	2	3	4
Number of crates	120	220	170	110

Draw a pictogram to represent the above information, using  to represent 40 crates.

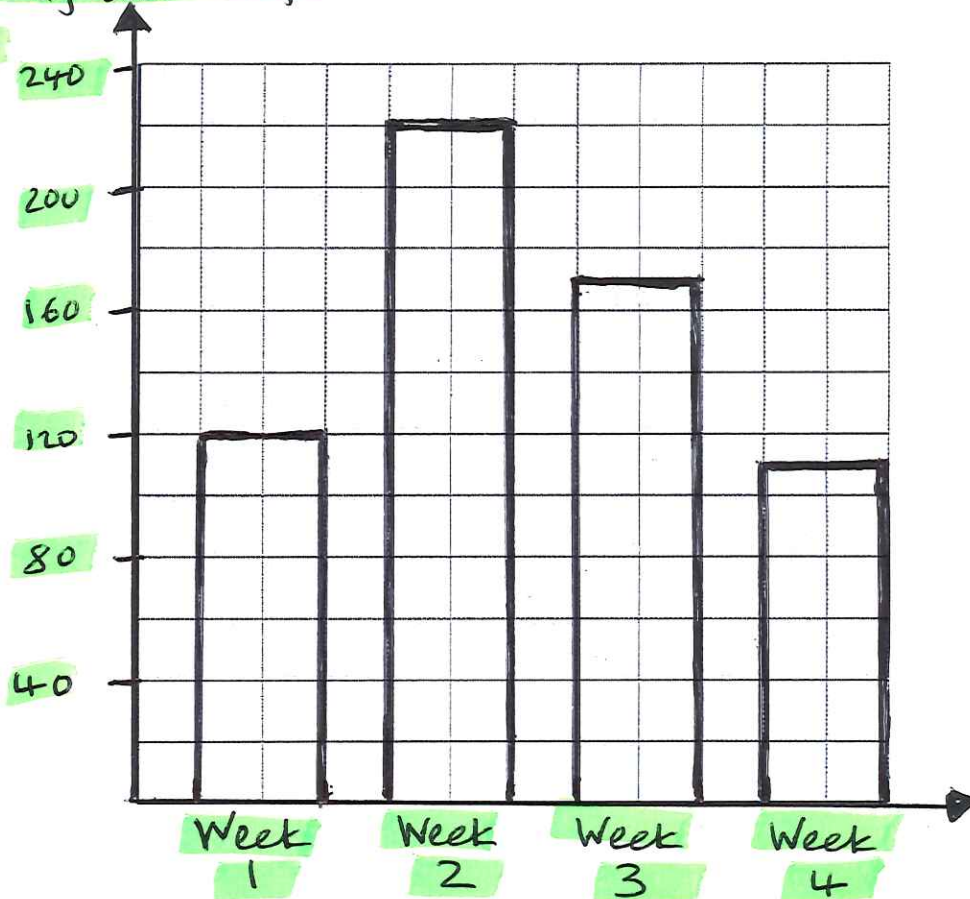


[4]

- (b) On the squared paper on the following page draw a bar graph to represent the data given above.

[4]

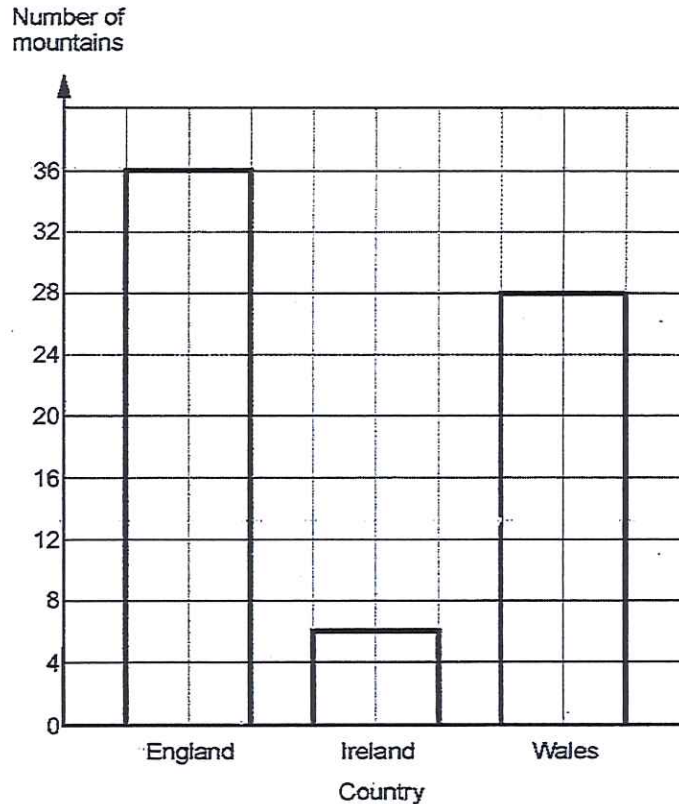
Number of crates of
oranges



Be very careful to label up your bar chart properly.

5.

The bar chart shown below was drawn using information found on an internet web page. It shows the number of mountains in each of the three countries of England, Ireland and Wales, whose heights are in the range 800 metres to 1000 metres.



- (a) How many mountains are there in Wales whose heights are in the range 800 m to 1000 m? [1]

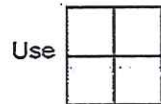
28

- (b) How many mountains are there altogether in the three countries whose heights are in the range 800 m to 1000 m? [1]

$$36 + 6 + 28 = 70$$

- (c) There are 280 mountains in Scotland whose heights are in the range 800 m to 1000 m.

In the box below, draw a pictogram which compares the data for Scotland with the total for the other three countries.



Use to represent 40 mountains.

[2]

Scotland	
Total for England, Ireland and Wales	

6.

A flight to New York had 450 passengers.

A survey was completed to see what the 450 passengers did for most of their time during the flight.

- 120 passengers watched films
- 60 passengers played games
- 130 passengers listened to music
- 30 passengers read a book
- The rest slept.

Draw a pictogram to represent what the 450 passengers did for most of their time during the flight to New York. [5]

Key:  represents 20 passengers.

Time spent								
Watching films								
Playing games								
Listening to music								
Reading a book								
Sleeping								

$$\begin{array}{r}
 120 \\
 60 \\
 + 130 \\
 \hline
 340 \\
 1
 \end{array}
 \qquad
 \begin{array}{r}
 450 \\
 - 340 \\
 \hline
 110
 \end{array}
 \qquad
 \text{So } \underline{110 \text{ slept}}$$