

Working Backwards

For each of the following questions, you have to work backwards, starting at the end of the question and then do the opposite calculation that it states.

Example:

1

Jemma thinks of a number.

[Extra] She says,

*'Add 3 to my number and then multiply the result by 5
The answer is 35'*



What is Jemma's number?

Start with 35 and divide by 5 then subtract 3.

$$35 \div 5 = 7$$

$$7 - 3 = 4$$

QUESTIONS:

1.

Riaz thinks of a number.

He says,

*'Halve my number and then add 17
The answer is 23'*

What is Riaz's number?

2.

Josh thinks of a number.

He adds 4

He multiplies his result by 3

Then he takes away 9

His final answer is 90

What number did Josh start with?

3.

Lara chooses a number less than 100

She divides it by 3 and then subtracts 11

She then divides this result by 2

Her answer is 10.5

What was the number she started with?

4.

Seb had some cherries.

Every day he ate 10 cherries and gave 5 away.

After he gave the last 5 cherries away, he had eaten 40 cherries altogether.

How many cherries did Seb have at the start?

5.

Monica thinks of a whole number.

She multiplies it by 3

She rounds her answer to the nearest 10

The result is 40

Write all the possible numbers that Monica could have started with.

Now try and write 2 questions of your own to ask your family to solve.

Answers:

1.

Riaz thinks of a number.

He says,

*'Halve my number and then add 17
The answer is 23'*

What is Riaz's number?

FORWARDS $\rightarrow \div 2 \rightarrow + 17 \rightarrow 23$

BACKWARDS
 $23 - 17 = 6$
 $6 \times 2 = \underline{\underline{12}}$

12

2.

Josh thinks of a number.

He adds 4

He multiplies his result by 3

Then he takes away 9

His final answer is 90



What number did Josh start with?

FORWARDS $\rightarrow + 4 \rightarrow \times 3 \rightarrow - 9 \rightarrow 90$

BACKWARDS
 $90 + 9 = 99$
 $99 \div 3 = 33$
 $33 - 4 = \underline{\underline{29}}$

29

3.

Lara chooses a number less than 100

She divides it by 3 and then subtracts 11

She then divides this result by 2

Her answer is 10.5

What was the number she started with?

FORWARDS $\div 3$ $- 11$ $\div 2 \rightarrow 10.5$

BACKWARDS

$$10.5 \times 2 = 21$$
$$21 + 11 = 32$$
$$32 \times 3 = \underline{\underline{96}}$$

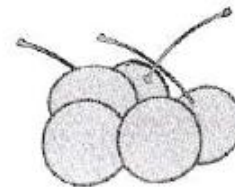
96

4.

Seb had some cherries.

Every day he ate 10 cherries and gave 5 away.

After he gave the last 5 cherries away, he had eaten 40 cherries altogether.



How many cherries did Seb have at the start?

<u>EAT</u>	<u>GIVE AWAY</u>
10	5
10	5
10	5
10	5
<u>TOTAL</u> <u>40</u>	<u>20</u> \rightarrow <u>60</u>

60

5.

Monica thinks of a whole number.

She multiplies it by 3

She rounds her answer to the nearest 10

The result is 40

} Look for A MULTIPLE
OF 3 WHICH ROUNDS
TO 40!

Write all the possible numbers that Monica could have started with.

12, 13 OR 14

