

## Problem solving and reasoning questions

1. Complete these diagrams.

20		
13	?	?

20		
?	4	?

2. Now try some more like this in these blank diagrams.

20		

20		

20		

3. Write a sentence with a missing number.  
It must also include the number 20.

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4. Correct Tina's work. What mistake is she making?

$$13 + 17 = 20$$

$$20 - 14 = 16$$

$$20 - 11 = 19$$

## Answers

1. Complete these diagrams.

20		
13	?	?

The missing pair should total 7.

20		
?	4	?

The missing pair should total 16.

One strategy could be to choose a small number for one of the missing pair; then apply number bonds to find the other missing number.

2. [Now try some more like this in these blank diagrams.]

3. Write a sentence with a missing number.

It must also include the number 20.

e.g.  $\underline{\quad} + 20 = 27$ . (Answer 7).

4. Correct Tina's work. What mistake is she making?

$$13 + 17 = 20 \quad 30$$

$$20 - 14 = 16 \quad 6$$

$$20 - 11 = 19 \quad 9$$

In the addition question she has only added the 10s and ignored the 1s (or possibly added the 3 and 7 and then added just one 10); in the subtraction questions she has subtracted the 1s only, recognising number bonds, but mixing up what to do with the 10s digit.