

Solutions to “True or False” – Set 1

Submitted by Gracie and Georgie,
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$$19 + 15 = 34$$

This is **true** because I know that $20 + 15 = 35$ and 19 is one less than 20, so the answer is one less than 35.

$$34 = 19 + 15$$

This is **true** because the previous sum has just been swapped around.

Gracie

$$19 + 15 = 0 + 34$$

This is **true** because adding zero makes no difference to 34.

Gracie

$$34 = 16 + 17$$

This is **false** because 6 add 7 is 13, therefore the answer should end in a three, and 34 does not end in a three.

Georgie

$$19 + 15 = 15 + 19$$

This is **true** because I know that addition is **commutative**. This means that the numbers in an addition number sentence can be written either way round.

Georgie

$$19 + 15 = 21 + 13$$

This is **true** because if you have added 2 onto 19 and taken 2 away from 15.

Gracie

$$34 = 34$$

This is **true** because 34 is the same as 34.

Georgie

$$19 + 15 = 20 + 16$$

This is **false** because you have added one onto both 19 and 15.

Georgie

$$19 + 15 = 34 + 0$$

This is **true** because this one is exactly the same as $19 + 15 = 0 + 34$, except the zero and 34 have moved places. I know that addition is **commutative** so this is true.

Georgie

$$19 + 15 = 22 + 18$$

This is **false** because you have added numbers onto both 19 and 15.

Gracie

$$19 + 15 = 34 + 15$$

This is **false** because I know from the first question that $19 + 15 = 34$, so if I add another 15 it's going to be larger.

Georgie

$$15 + 19 = 20 + 14$$

This is **true** because you have added one to 19 and taken one away from 15.

Gracie

Solutions to "True or False" – Set 2

Submitted by Gracie,

Horfield CEVC Primary School, Bristol

$$346 + 289 = 349 + 286$$

This is **true** because they have just swapped the ones digits around.

Gracie

$$727 + 581 = 581 + 727$$

This is **true** because the numbers are the same on each side. We know that addition is **commutative** so this is true.

Gracie and Georgie

$$478 - 192 = 480 - 194$$

This is **true** because they have added two to each number on the second half of the question so the **difference** is still the **same**.

Gracie

$$831 - 344 = 841 + 334$$

This is **false** because the numbers are different.

Gracie

$$727 + 581 - 581 = 727$$

This is **true** because you are adding 581, but then you are taking it away again.

Gracie

$$831 - 344 + 346 = 831$$

This is **false** because instead of adding 346, you would need to add 344 to make it equal.

Gracie

$$169 + 672 = 2041$$

This is **false** because if you round 672 to 700 (nearest 100) and you round 169 to 200 (nearest hundred), you are nowhere near 2000.

Gracie