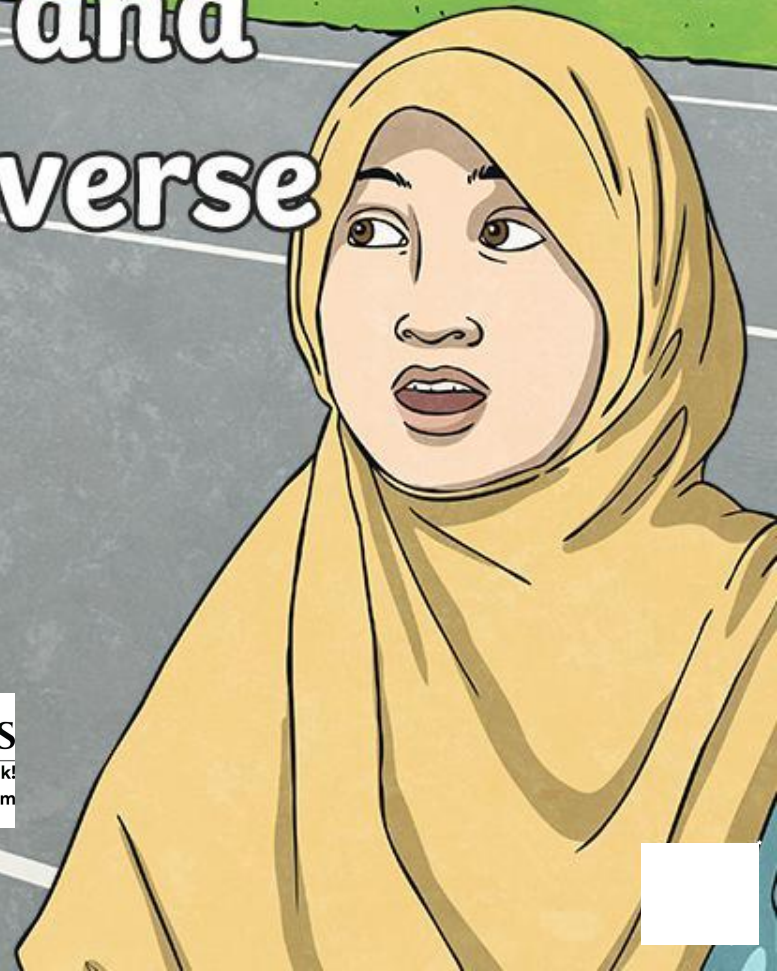


# Estimate and Use the Inverse



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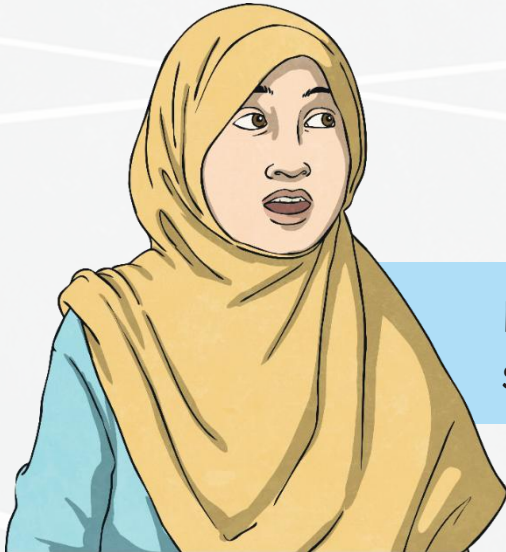
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# How Accurate Is Your Estimate?

Laura has a collection of 3098 shells.  
Fatima has a collection of 2683 shells.



Laura says they have 6000 shells altogether.

Fatima says they have 5800 shells altogether.



Discuss with a partner which estimate is more accurate and which is most appropriate. Compare your ideas with another pair.

# Check With an Estimate

Alfie has completed the following calculations. Fatima spots some of the answers are incorrect by estimating. Which answers can you spot are incorrect by estimating the answer? Discuss your ideas with a partner.



$$4826 + 2673 = 7899$$

$$2098 + 783 = 2851$$

$$7803 - 562 = 7241$$

$$4193 - 3827 = 1766$$

7499 estimate 7500

2881 estimate 2880

correct

366 estimate 400 or 370

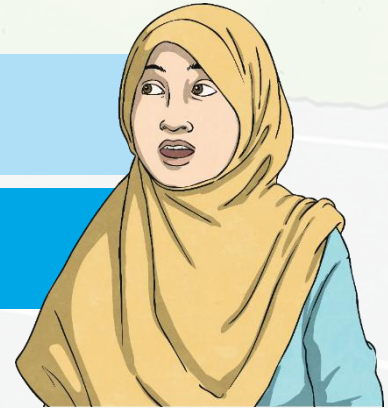


# Check Using the Inverse

Fatima, Laura and Alfie each check the calculation  $5083 + 3682 = 8765$  using the inverse. Identify the errors each has made and discuss your ideas with a partner.

Fatima:  $8765 + 5083$

Should be a subtraction



Alfie:  $5083 - 3682$

Should be  $8765 - 5083$  or  $8765 - 3682$



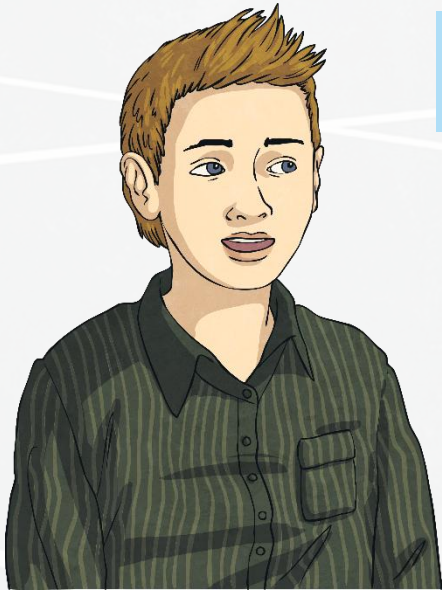
Laura:  $8756 - 5083$

should be 8765



# Checking Addition

Alfie says that he always checks addition calculations using an inverse subtraction. Laura prefers to reverse the addition and repeat the calculation.



$$2953 + 1604 = 4557$$

Alfie:  $4557 - 1604 =$

Laura:  $1604 + 2953 =$

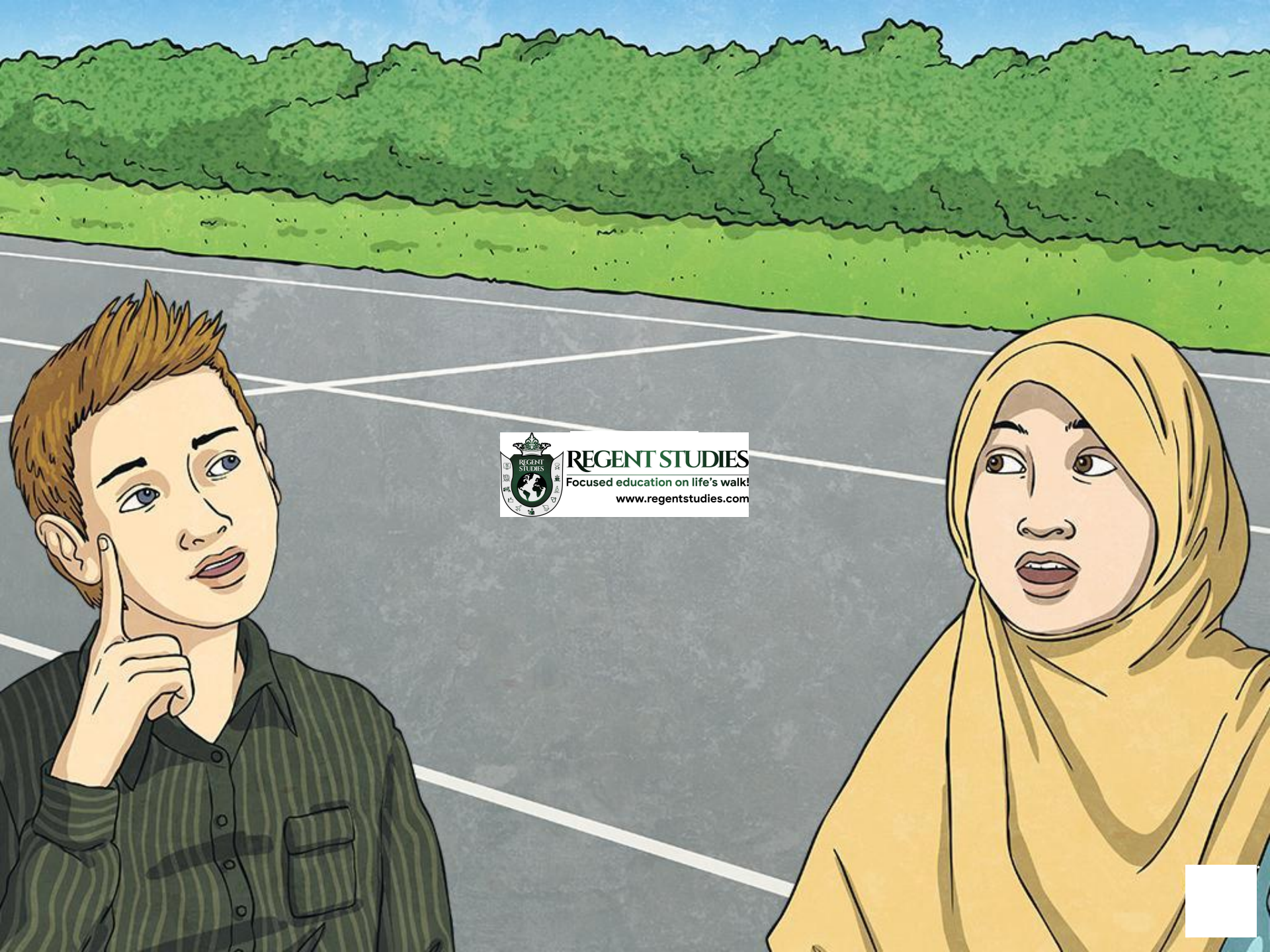
Discuss the advantages and disadvantages of each method.



The inverse subtraction is often more difficult than addition and therefore more open to mistakes.

Repeating a calculation can mean mistakes aren't spotted, although reversing the numbers can help with this.





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