



Inverse operations

CAPS: Grade 6, Term 3

Number Operations and Relationships

Using addition and subtraction as inverse operations

Note

Remember: (*inverse means opposite*)

You can use subtraction to check your answer to an addition sum.

E.g. $20\ 000 + 12\ 000 = 32\ 000$

To check this you can say: $32\ 000 - 12\ 000$ must equal $20\ 000$ or $32\ 000 - 20\ 000$ must equal $12\ 000$.

Likewise if the original sum was $32\ 000 - 12\ 000 = 20\ 000$. You could check your answer of $20\ 000$ by asking does $20\ 000$ plus $12\ 000$ equal $32\ 000$?

We can therefore say that addition and subtraction are inverse operations of each other.

Activity 1

① Calculate. Then check your answers using subtraction.

a $43\ 201 + 2\ 567$

b $732 + 10\ 782$

c $1\ 803 + 3\ 190$

d $2\ 648\ 934 + 124\ 564$

e $987\ 145 + 568$



② Calculate. Then check your answers using addition.

(a) $53\,123 - 19\,010$

(b) $4\,566 - 2\,340$

(c) $10\,345 - 209$

(d) $67\,893 - 13\,987$

Activity 2

① Work out the inverse operation for the following sums. The first one has been done for you.

(a) $9 + 3$ and $3 + 9$

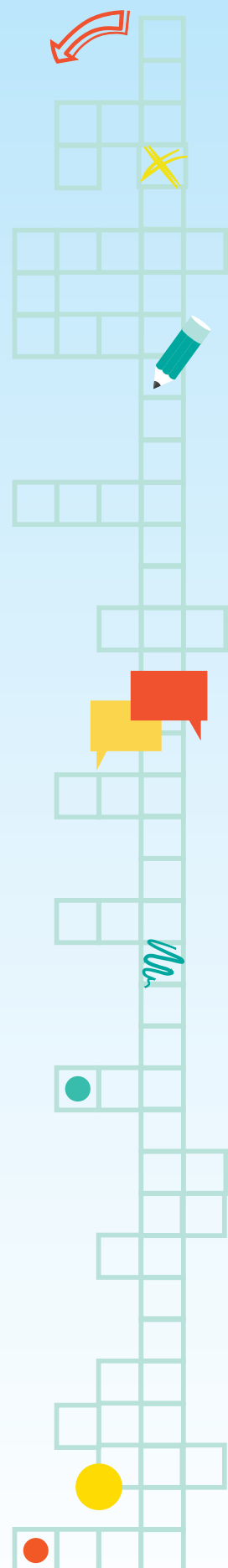
$12 - 3 = 9$ and $12 - 9 = 3$

(b) $24 + 13$ and $13 + 24$

(c) $120 + 130$ and $130 + 120$

(d) $1\,450 + 2\,150$ and $2\,150 + 1\,450$

(e) What do you notice? Write down the rule about addition which you have just seen.





② Zinzi is solving a problem. The problem reads:

At a music concert, 234 987 people attend on the Friday night. On the Saturday night, 311 402 people attend. How many more people attended on the Saturday than on the Friday? *

Zinzi writes her number sentence like this:

$$234\,987 - 311\,402 = \square$$

(a) Is Zinzi's number sentence correct? Explain your answer.

(b) Solve the problem for Zinzi.

(c) Check your answer using the inverse operation of the one you used.

Teacher Tip

Learners do not need to know the terms such as the commutative law of addition which is what some textbooks call the property of addition explored in this lesson. However they do need to know what the properties mean for calculations.

