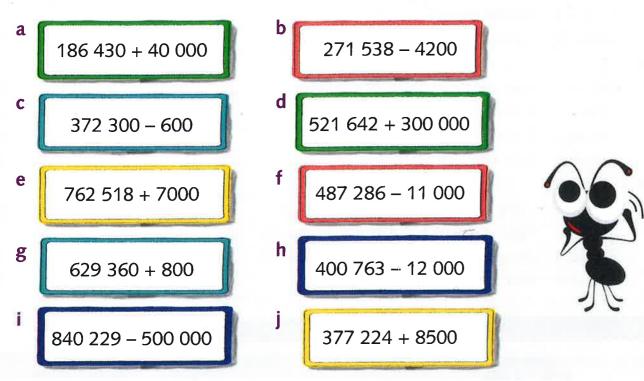
## Mental addition and subtraction



Perform mental calculations including large numbers



1 Work out these calculations mentally.



2 Adding or subtracting a multiple of 10, 100 or even 1000 is not difficult. What types of addition and subtraction calculations do you find difficult to calculate mentally and need to use a formal written method for? Include in your explanation some examples of these types of calculations.



Work out these calculations mentally.

| a  | 2 670 000   | b  | 4 350 800   | С | 5 714 000   |
|----|-------------|----|-------------|---|-------------|
| i  | + 500 000   | i  | + 54 000    |   | i + 700 000 |
| ii | i + 7000    | ii | + 6000      |   | ii + 8000   |
| ii | ii – 34 000 | ii | i – 400 000 |   | iii – 5000  |
| į  | v - 300 000 | iv | r – 3000    |   | iv - 400    |

| d | 3 157 800          | е     | 7 000 000   | f | 4 390 822    |
|---|--------------------|-------|-------------|---|--------------|
| i | + 900              | i     | + 175 000   | i | + 500        |
| i | i +63 000          | a = j | i + 38 000  | i | i .+ 600 000 |
| i | ii – 38 000        | ii    | ii – 23 000 | i | ii – 56 000  |
| į | <b>v</b> – 400 000 | i     | v - 300     | i | v – 700 000  |

2 Play these two games with a partner.

## More than 1 000 000

- Both write down the number 10 000. This is your start number.
- Take turns to spin the spinner and roll the dice.
- Each time, put the two together to make a number. So, if you roll a 2 and spin 'ten thousands', then your number would be 20 000.
- Add your number to the start number.
- Continue until one player's number is greater than 1 000 000. This player is the winner.

## Less than 10 000

- Begin with a start number of 1 000 000.
- Play the game as described above, but this time. subtract the number you make using the dice and the spinner.
- The winner is the first player whose number is less than 10 000.

## You will need:

- Resource 78: Place valué spinner
- · pencil and paper clip - for the spinner
- 1–6 dice



- Develop a different version of the games in Challenges 2,3 that involves addition and subtraction.
- What will the target number be?
- What will the start number be?
- What kind of dice will you use?
- Will you want a different type of spinner?

I am going to include an unlucky number. If you roll it you miss a turn!

