

# The Strategy Strut

You need  a classmate

## Activity One

Mārama is recording all the different strategies her friends are using to solve the problem below.

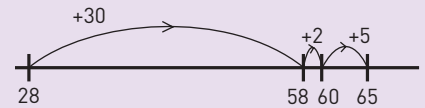
**Problem:**

There are 28 people on the train, and then 37 people get on. How many are on the train now?

$$28 + 37 = \square$$

I'll use rounding and compensation.  
 Round 28 up 2 to make 30.  
 Round 37 up 3 to make 40.  
 $30 + 40 = 70$   
 Take off what I've rounded up:  
 $70 - 5 = 65$

What about using number lines?



Sui

I'm going to use place value.  
 $20 + 30 = 50$   
 $8 + 7$  is  $8 + 8 - 1 = 15$   
 $50 + 15 = 65$

I'm borrowing to make tidy numbers.  
 Take 2 from the 37 and put it on the 28 to make 30.  
 $30 + 35 = 65$ . Or I could take 3 from 28 and put it on the 37 to make 40.  $40 + 25 = 65$

1. Use each of Mārama's friends' strategies from above to help you complete these two equations. Record the strategies as you use them.

- a.  $99 + 48 =$
- b.  $238 + 596 =$

2. Which strategies do you think are the best for completing these equations? Why? Discuss this with a classmate.

3. For each equation below, choose one of the strategies. Complete each equation and then discuss with your classmate why you chose that strategy.

a.  $46 + 27 =$       b.  $64 + 29 =$       c.  $39 + 45 =$   
 d.  $75 + 101 =$       e.  $96 + 84 =$       f.  $17 + 37 =$

### Activity Two

Mārama's friends are now working on a subtraction problem. These are their strategies:

Problem:

There are 52 cookies in the jar, and 28 are eaten. How many are left in the jar?  
 $52 - 28 = \square$

52 - 20 = 32  
 I need to take off another 8.  
 8 is the same as 2 and 6.  
 $32 - 2 = 30$  and  $30 - 6 = 24$

Hamish

Erin

Sui

Taufa

I'll use tidy numbers.  
 Round 28 up 2 to make 30.  
 $52 - 30 = 22$   
 Now add 2:  $22 + 2 = 24$

I'll use a number line again:  
 $-1 \quad -5 \quad -2$   
 $\leftarrow$  24 25 30 32 52

I'm changing it to addition.  
 28 plus what is 52?  
 $28 + 2 = 30$   
 $30 + 20 = 50$   
 $50 + 2 = 52$   
 $2 + 20 + 2 = 24$

1. a. Use each of the friends' strategies to complete the two equations below. Show how you used the strategies.  
 i.  $51 - 19 =$   
 ii.  $74 - 37 =$   
 b. Which strategies do you think are the best for completing these equations? Why?

2. For each equation below, choose one of the strategies. Complete each equation and then discuss with your classmate why you chose that strategy.

a.  $43 - 18 =$       b.  $61 - 39 =$       c.  $63 - 26 =$   
 d.  $93 - 48 =$       e.  $82 - 45 =$       f.  $75 - 37 =$   
 g.  $63 - 25 =$       h.  $123 - 59 =$       i.  $304 - 198 =$   
 j.  $634 - 499 =$       k.  $231 - 156 =$       l.  $135 - 67 =$