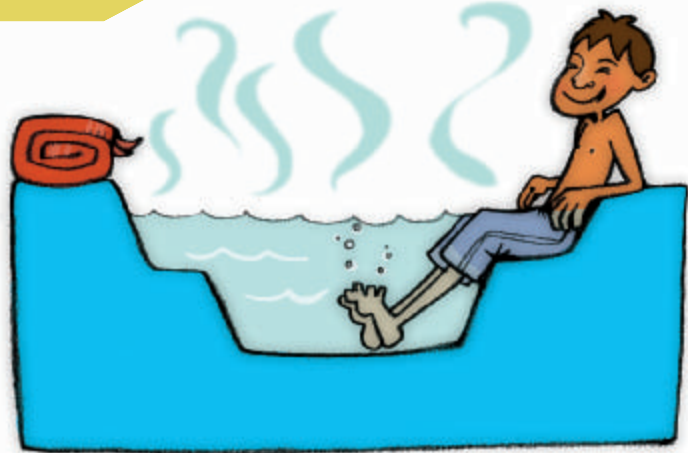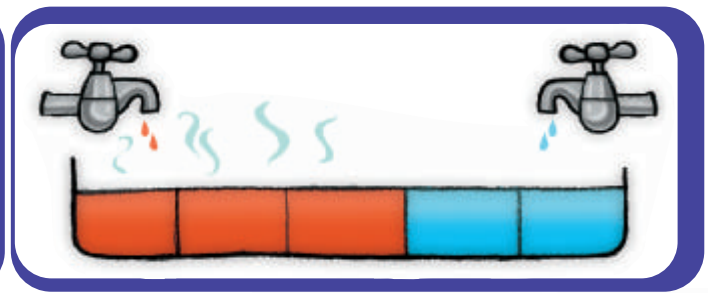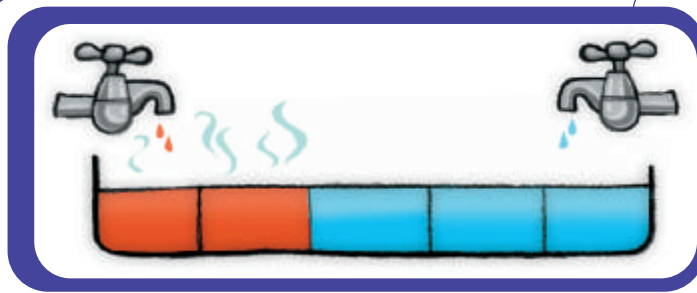# Running Hot and Cold

You need ☑ a classmate

Activity

Vince is staying with his family at a motel in Napier. He asks the manager how long it would take to fill the spa in their unit.

"45 minutes using just the cold tap and 30 minutes using just the hot tap," he says.

1. **a.** Vince turns both taps on full. Discuss with a classmate which strip diagram shows what happens.

b. With both taps on full, what part (fraction) of the water in the spa comes from each?

2. **a.** How much of the spa does each tap fill in 3 minutes?

b. With both taps on full, what fraction of the spa will fill in 3 minutes?

c. With both taps on full, how long will it take Vince to fill the spa?

3. Vince gets four friends to time how long it takes to fill their baths:

Friend	Cold only (min)	Hot only (min)	Both taps
Sharyn	20	30	
Mishal	15	35	
Jude	10	15	
Ron	12	20	

a. Copy the table and complete the last column.

b. Explain to a classmate how you worked out the numbers.