## Duncan's Day

Algebra-Level 3

You need 🗸 counters or multilink cubes

## Activity

Duncan the Donkey carries large bottles of water through the scorching Australian outback to miners working at a mining camp. During the day, he walks from the bore to the mining camp and back. Each day, the miners' order for water is faxed to the general store at the bore.

Duncan can carry three full bottles of water on each trip he makes to the mining camp. During the day, he must keep one of these bottles with him as he plods back to the bore in case he gets thirsty walking in the hot sun. On his last trip back to the bore it is dusk, so he leaves all the full bottles at the mine.

Nine bottles of water today,



Eight bottles of <sup>Water</sup> please.

How many one-way walks will Duncan make for each of these orders?

Seven bottles of water today

please.

Can you think of a rule to work out how many one-way walks Duncan must do to deliver a given number of water bottles?

What would be the rule for the number of one-way walks per load of bottles if Duncan could carry four bottles at a time instead of three bottles?

2.

3.