# Face the Facts

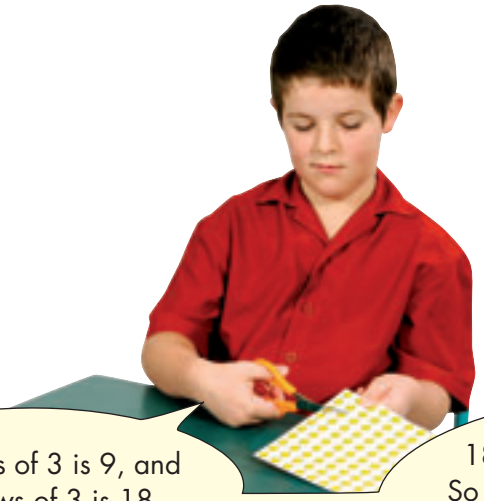
**You need** ☑ a photocopy of the happy faces hundreds board copymaster
☑ scissors ☑ a glue stick ☑ a classmate

## Activity

Elton is cutting up a happy faces hundreds board. He is investigating ways of working out how many faces he has in different-sized rectangles.

1.

3 x 3 = 9



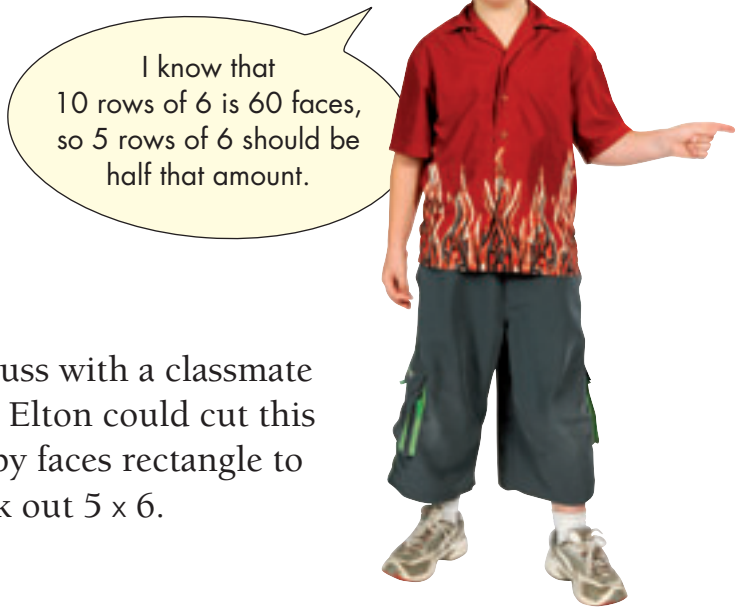
3 rows of 3 is 9, and
6 rows of 3 is 18.

18 is twice as big as 9.
So would 12 rows of 3 be
the same as 2 x 18?

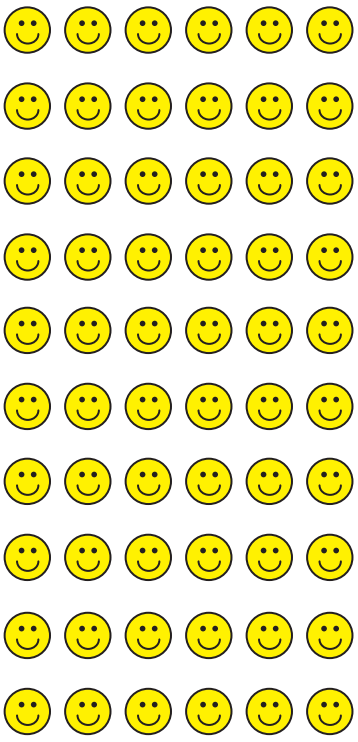
6 x 3 = 18

Cut up some happy faces and arrange them to see if Elton's thinking is right.

2. Elton is working out 5 x 6.



I know that
10 rows of 6 is 60 faces,
so 5 rows of 6 should be
half that amount.



Discuss with a classmate how Elton could cut this happy faces rectangle to work out 5 x 6.

3 x 4 = 12

**3.** **a.** If you know that 3 x 4 = 12, how could you use happy faces to work out 3 x 8 = ☐?

**b.** Use your answer to 3 x 8 to work out 3 x 16.
Check your answer with happy faces if you need to.

**4.** **a.** Use halving or doubling to solve the problems on the trains below.

**i.** 2 x 8 = 16, so → 4 x 8 = ☐ → 8 x 8 = ☐ → 16 x 8 = ☐

**ii.** 4 x 20 = 80, so → 4 x 10 = ☐ → 4 x 5 = ☐ → 4 x $2\frac{1}{2}$ = ☐

**b.**


Find some other problems that you could solve using 8 x 10 = 80 and halving or doubling. Swap your problems with a classmate's.