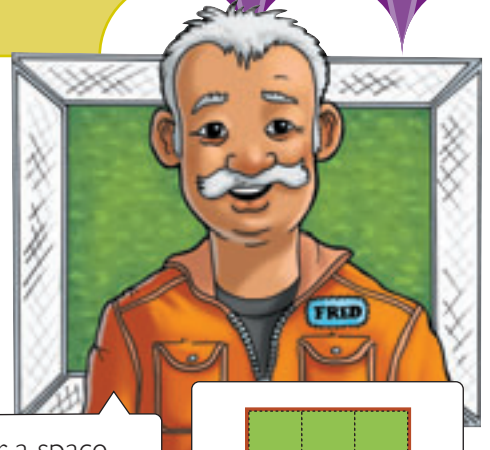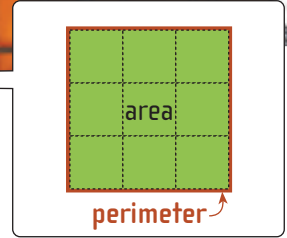# Fred's Rent-a-Fence

Activity

Fred rents out fences. Today he's putting up some fences to help keep the crowds safe at the showgrounds during the annual show.

Each fence panel is 1 metre long, and Fred is using them to fence rectangular spaces.

> The area is the number of squares it takes to cover a space. The perimeter is the distance around the outside of a space.

1. Fred is fencing off a space for the dodgems. They have rented 80 square metres of space.

   a. Find five different rectangular shapes that Fred could enclose with his fence panels to cover 80 square metres. Which of these would be suitable for the dodgems?

   b. Fencing costs $3 per metre panel to hire. Find the cheapest way to fence 80 square metres. Is this one of the shapes that will suit the dodgems?

2. Fred has 48 panels to fence off a space for the skydivers to land in.

   a. How many different-shaped rectangles could he make using 48 one-metre panels?

   b. The skydivers are nervous about landing with all the people around and want the biggest possible area fenced off. What is the largest rectangular area that can be made with 48 metres of fencing?

3. Fred fences off a space for the Whirling Cup 'n' Saucer ride that looks like this:

10 metres | 150 square metres
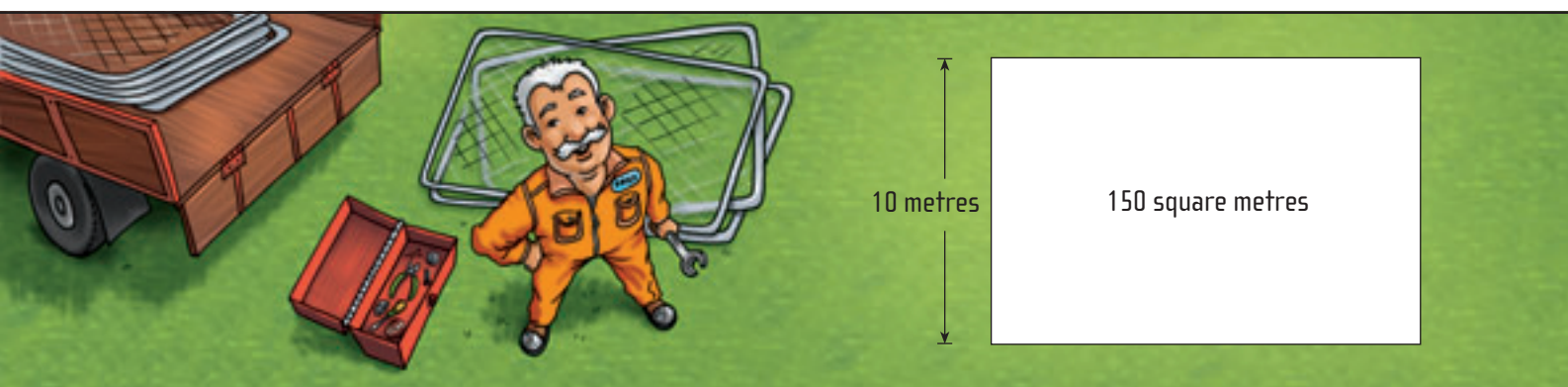
What is the total distance around the fenced space (the perimeter)?

Investigation

Is it possible to make a fenced area that has the same number of units for its perimeter measurement and its area?