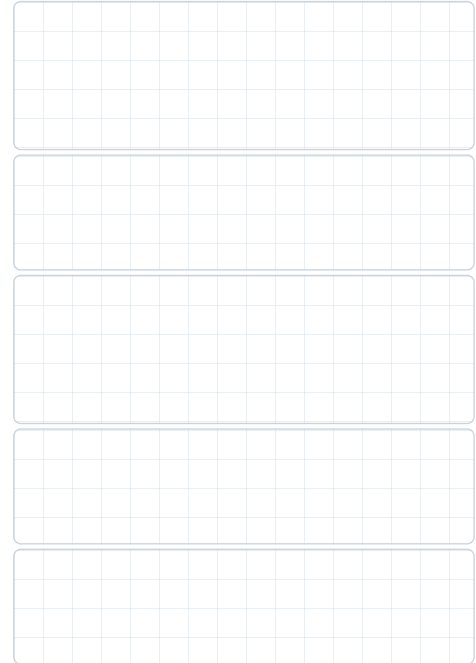


Comparing area and perimeter: an investigation

MODULE 5 · AREA, PERIMETER AND VOLUME MEASURES

★ STRETCH PROBLEMS

- 1 Ferdia makes a rectangle from **10** tiles. Each tile is a square with **1 cm** sides. The rectangle has a perimeter of **14 cm**. How many tiles long and how many tiles wide is it?
- 2 Compare a **1** by **11** rectangle and a **3** by **4** rectangle, both made of **1 cm** squares. Which one covers more squares? Which one has the longer way around?
- 3 Eimear says rectangles that cover the same number of squares always have the same perimeter. Check with a **1** by **9** rectangle and a **3** by **3** square made of **1 cm** squares. Is she right?
- 4 Oisín makes a rectangle **2** squares wide and **9** squares long from **1 cm** squares. Then he adds a third row of **9** squares. How do its area and its perimeter change?
- 5 Three rectangles are each made from **24** square tiles: **2** by **12**, **3** by **8** and **4** by **6**. Put them in order from the longest way around to the shortest.



● INVESTIGATE

Same perimeter, different area

On squared paper, draw as many different rectangles as you can with a perimeter of **16 cm**. Count the square units inside each one. Which rectangle has the **largest** area? Which has the smallest? What do you notice?

