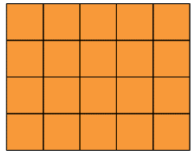# Activity 6 Assessment
Exploring the Area of Rectangles

Estimating and Investigating Area

| Recognizes that area is measured using square units.	Uses referents to estimate area of regular and irregular shapes, then measures to check.	Determines area by counting squares, using square metres and/or square centimetres.	Determines the area of regular shapes by counting whole and half squares.

"I covered the rectangle with square tiles and determined the area to be 20 square units."
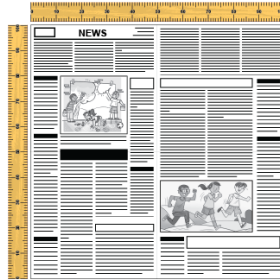
"I chose a square piece of newspaper as a referent for 1 m^2. I used the referent to estimate and measure the area of the blackboard. I estimated the area to be 25 m^2 and it was actually 32 m^2."
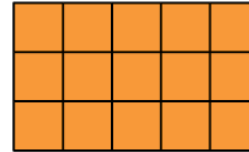
"On the grid, each square represents 1 square centimetre. There are 15 squares, so the area of the rectangle is 15 cm^2."

"I counted squares on the 1-cm grid: 12 whole squares and 4 half squares, which make 2 whole squares, so the area is 14 cm."

Observations/Documentation

Activity 6 Assessment
Exploring the Area of Rectangles

Estimating and Investigating Area (cont'd)

| Uses row and column structure of an array to determine area of a rectangle.	Constructs different rectangles for a given area (square centimetres or square metres).	Determines the area of irregular shapes by decomposing into known shapes.	Flexibly determines the area of regular and irregular shapes and solves problems.

Uses row and column structure of an array to determine area of a rectangle.

4 m
6 m
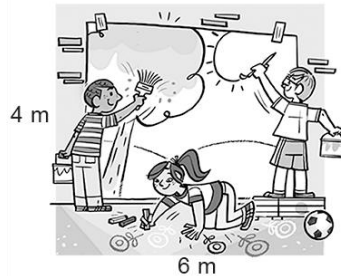
"I traced the shape on a grid and let each square represent 1 m². The rectangle forms an array with 4 rows of 6 squares: $4 \times 6 = 24$; the area of the mural is 24 m²."
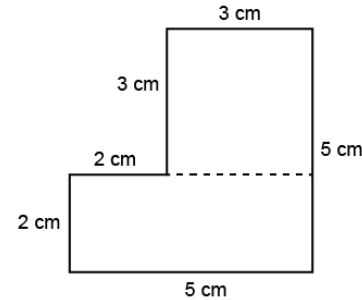
Constructs different rectangles for a given area (square centimetres or square metres).

Area of rectangle = 16 cm²
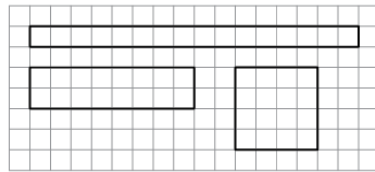
"I constructed 3 different rectangles:
A square with side length 4 cm:
$4 \text{ cm} \times 4 \text{ cm} = 16 \text{ cm}^2$.
A 2-cm by 8-cm rectangle:
$2 \text{ cm} \times 8 \text{ cm} = 16 \text{ cm}^2$
A 1-cm by 16- cm rectangle:
$1 \text{ cm} \times 16 \text{ cm} = 16 \text{ cm}^2$"

Determines the area of irregular shapes by decomposing into known shapes.

3 cm
3 cm
2 cm
5 cm
2 cm
5 cm

"I decomposed the shape into a square with side length 3 cm and a rectangle with length 5 cm and width 2 cm.
Area square:
$A = 3 \text{ cm} \times 3 \text{ cm} = 9 \text{ cm}^2$
Area rectangle:
$A = 5 \text{ cm} \times 2 \text{ cm} = 10 \text{ cm}^2$
Area of shape:
$A = 9 \text{ cm}^2 + 10 \text{ cm}^2 = 19 \text{ cm}^2$"

Flexibly determines the area of regular and irregular shapes and solves problems.

A driveway is made from 1 m² tiles. It is a rectangle with area 75 m². The driveway is 5 m wide. How long is it?

"I know $A = l \times w$, so I solved the equation $75 = l \times 5$. I know $15 \times 5 = 75$, so the driveway is 15 m long."

Observations/Documentation