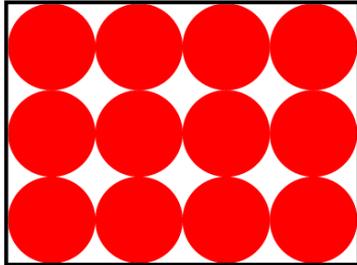


Activity 3 Assessment

Estimating and Measuring Area in Square Centimetres

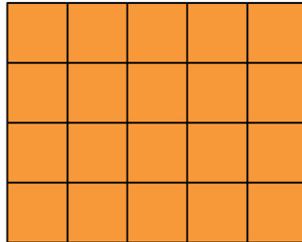
Investigating, Estimating, and Measuring Area

Covers with non-standard units that don't tile to measure area



"I covered the rectangle with counters, but there are gaps. Not all the rectangle is covered."

Recognizes that area is measured using square units



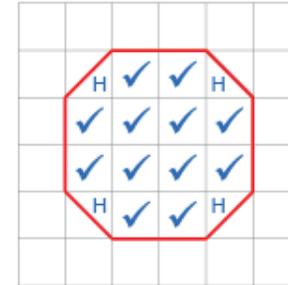
"I covered the rectangle with square tiles and determined the area to be 20 square units."

Tiles with square centimetres and determines area by counting squares



"I covered the octagon with square centimetres and counted 12 whole squares. So, the area is about 12 square centimetres."

Uses partial units to get more precise measure



"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 cm²."

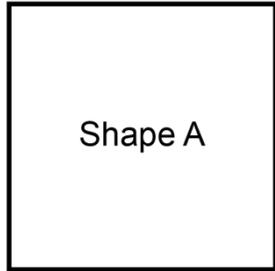
Observations/Documentation

Activity 3 Assessment

Estimating and Measuring Area in Square Centimetres

Investigating, Estimating, and Measuring Area (cont'd)

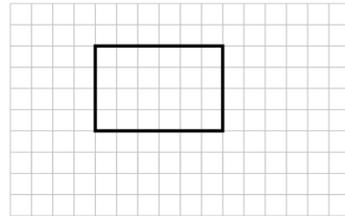
Uses referents to estimate area, then measures to check



Shape A

"I used my fingernail as a referent for 1 cm². I estimated the area of Shape A to be 14 cm². Then I measured to check and the area was 16 cm²."

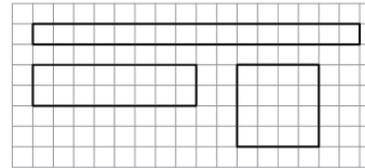
Uses row and column structure of an array to determine area of a rectangle



"I traced the rectangle on a 1-cm grid where each square represents 1 cm². The rectangle forms an array with 4 rows of 6 squares: $4 \times 6 = 24$; the area of the rectangle is 24 cm²."

Constructs different rectangles for a given area (square centimetres)

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:
 $1 \text{ cm} \times 16 \text{ cm} = 16 \text{ cm}^2$."

Flexibly determines the area of shapes, including rectangles, and solves problems

A baseball ticket has an area of 75 cm². The ticket is 5 cm 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 ticket is 15 cm long."

Observations/Documentation