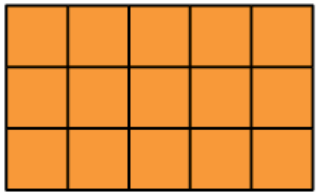
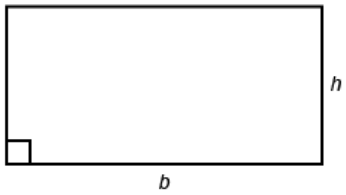
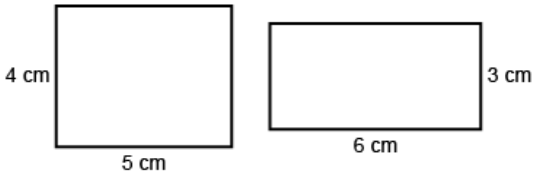
Measurement

Activity 4 Assessment

Relating the Perimeter and Area of Rectangles

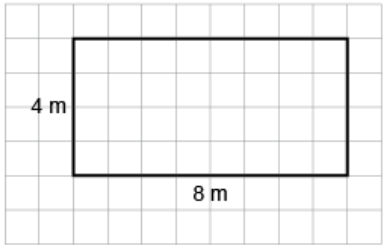
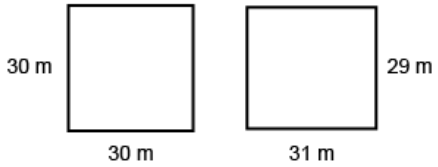
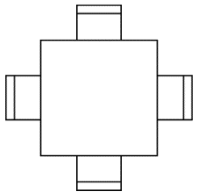
Measuring Area and Perimeter of Rectangles

Recognizes that the perimeter of a rectangle is the distance around and area is the number of tiles that cover it.  "Perimeter of rectangle: 3 + 5 + 3 + 5 = 16, 16 units; Area: 3 × 5 = 15, 15 square units."	Uses algebraic formulas to determine the perimeter and area of a rectangle.  "To determine the perimeter of a rectangle, I use the formula $P = 2b + 2h$ and to determine the area, I use the formula $A = b \times h$. For a rectangle with b = 6 m and h = 3 m: Perimeter: 2 × 6 m + 2 × 3 m = 18 m Area: 6 m × 3 m= 18 m^2."	Compares the perimeters and areas of rectangles.  "Both rectangles have a perimeter of 18 cm: 2 × 4 + 2 × 5 = 18; 2 × 6 + 2 × 3 = 18. The rectangles have different areas: 4 cm × 5 cm = 20 cm^2 and 6 cm × 3 cm = 18 cm^2."
Observations/Documentation		

Activity 4 Assessment

Relating the Perimeter and Area of Rectangles

Measuring Area and Perimeter of Rectangles (cont'd)

Constructs a rectangle with given perimeter/area and explains strategy used. Perimeter = 24 m  "To construct a rectangle with perimeter 24 m, the sum of the base and height needs to be 24 m ÷ 2 = 12 m. I chose 8 m and 4 m. To determine the area, I multiplied the base by the height: 8 m × 4 m = 32 m^2."	Constructs different rectangles for a given perimeter/area and describes strategies used. You have 120 m of fencing for a new school playground. Sketch 2 possible rectangles that would be a suitable shape  "I divided 120 m by 2 to get 60 m, the sum of the base and height. A square would have the greatest possible area, so I chose 2 dimensions close in value with a sum of 60 m: 30 m and 30 m; and 29 m and 31 m. The first playground has area 30 m × 30 m = 900 m^2 and the second playground has area 31 m × 29 m = 899 m^2."	Flexibly solves problems involving a given area and/or perimeter in a variety of contexts.  A square table can seat 1 student on each side. 24 tables are pushed together to make 1 large rectangular table. What is the greatest number of students who could be seated? "For an area of 24 square units, the length and width can be: 1 and 24; 2 and 12; 3 and 8; 4 and 6. For the greatest number of students, the perimeter has to be the greatest, which means its width is the least, 1 unit, and the length is 24 units. The perimeter is 50 units, so 50 students can be seated."

Observations/Documentation
