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| **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* = 2*b* + 2*h* and to determine the area, I use the formula *A* = *b* × *h*. For a rectangle with *b* = 6 m and *h* = 3 m:Perimeter: 2 × 6 m + 2 × 3 m = 18 mArea: 6 m × 3 m= 18 m2.” | 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 cm2 and 6 cm × 3 cm = 18 cm2.” |
| **Observations/Documentation** |
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| **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 m2.” | 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 m2 and the second playground has area 31 m × 29 m = 899 m2.” | 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** |
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