UNIT 1, LESSON 6

EXPLORING TRIANGLES :TRIANGLES ON A GRID

Goal (Essential Question)

What are some strategies **to find the** area **of a** triangle **on a** grid **?**

You can use what you know about the area **of** quadrilaterals **to help you determine the area of** triangles**. Here are two ways of doing this using a grid.**

Strategy 1

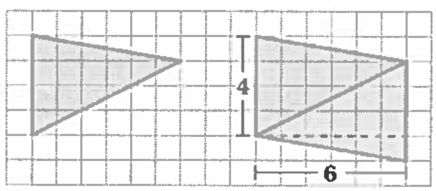
Make a copy **of the triangle and** rearrange **the two triangles to form a** parallelogram.

Determine the area of the parallelogram by multiplying **its** base **by its** height**.**

$4 \cdot 6$ = 24 square units

The area of the triangle is half **the area of the parallelogram**

$\frac{24}{2}$ = 12 square units .



Strategy 2

Draw a rectangle **around the triangle.**

Cut **the rectangle into two** smaller **rectangles. This also cuts the triangle into two** smaller **triangles.**

Determine the area **of each rectangle.**

$4 \cdot 3$ = 12 square units

$2 \cdot 3$ = 6 square units

The area of each triangle **is** half **the area of its matching rectangle.**

$\frac{12}{2}$ = 6 square units

$\frac{6}{2}$ = 3 square units

Add **the two smaller triangle areas together** 6+3 = 9 square units