What's the Area?

Goals

- Measure area in square units.
- Decompose a figure into parts that have an area of 1 square unit or $\frac{1}{2}$ square unit.
- Recognize that the area of a figure is equal to the sum of the areas of its parts.

Notes

Along with this problem set, it is beneficial for students to have opportunities to use geoboards. Hands-on experiences with constructing polygons and figuring out their areas provide the groundwork for understanding area formulas.
Solutions to all problems in this set appear on page 31.

Questions to Ask

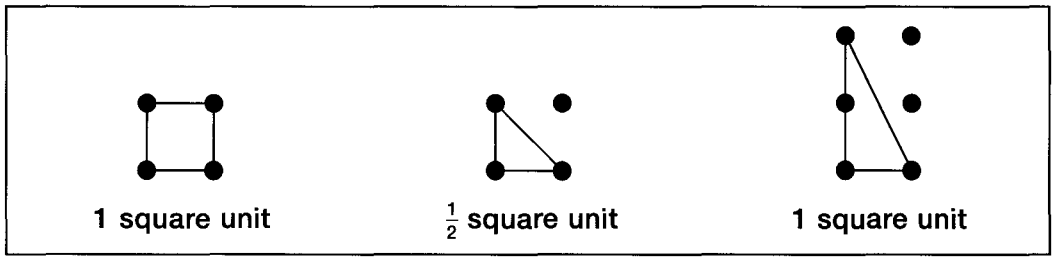
What's the Area? 1

- Look at the three figures at the top of the page. What are their shapes? (square, triangle, triangle)
- What is the area of the square? (1 square unit)
- How can you tell from looking at the square that the small triangle has an area of $\frac{1}{2}$ square unit? (If you cut the square in half along a diagonal, you get two small triangles. So each triangle has half the area of the square.)
- How can you explain why the area of the large triangle is 1 square unit? (Possible answer: If a diagonal is drawn in a rectangle that has an area of 2 square units, you get 2 identical triangles. Each triangle has an area of 1 square unit.)
- How can you figure out the area of the figure? (look for small squares, small triangles, and large triangles and count the square centimeters) How can you show these parts? (draw lines to separate the shape into squares and triangles)

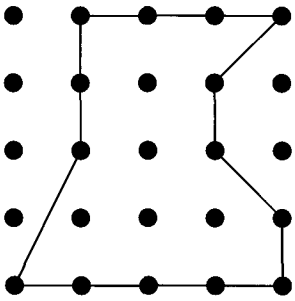
Solutions

1. 11
2. B

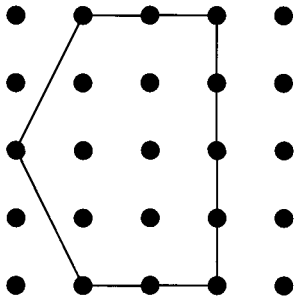
What's the Area? 1

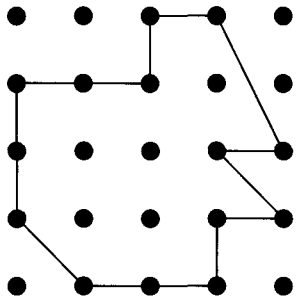


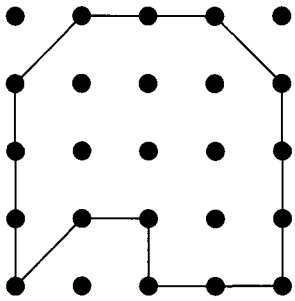
1. What is the area of this shape? _____ square units



2. Which of these shapes has the same area as the shape above? _____


A


B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