

2-29. BE THERE, OR BE SQUARE

- a. One square centimeter. One square inch. One square yard. One square mile.
- b. Students should make accurate drawings of a square centimeter and a square inch.
- c. cm^2 and ft^2

2-30. NATHANIEL'S PATIO

- a. The entire patio will require 36 patio tiles. The rectangle is 4 squares by 9 squares.
- b. $36 - 14 = 22$ tiles
- c. 9 feet by 4 feet, the area is 36 square feet.

2-31. See below:

- a. 15. Students should draw a 3 by 5 rectangular array and count or multiply $3 \cdot 5$
- b. 12. Students should draw a 6 by 2 rectangular array and multiply or count.
- c. 1200. Students are expected to sketch a rectangle that is about 3 times as long as wide (without gridlines) and label the sides appropriately. Students may visualize 60 rows with 20 units in each row.
- d. 1200 sq ft

2-32. THE KIDNEY BEAN DESK

- a. Students should measure in quarter inch square units and centimeter square units; the area is about 430 square quarter inches or about 177 square cm.
- b. The area measured in square inches is a smaller number; the larger the unit of area, the smaller the area measurement; the areas are the same; when the units used are larger, fewer of them are needed to cover a region of area.

2-33. See below:

- a. The area is 130 square centimeters. Methods will vary. Students will need to find the unmarked side lengths; the horizontal length is 5 cm, the vertical length is 6 cm. Students might then enclose the shape in a larger (10 cm by 15 cm) rectangle, find its area and the area of the extra piece (6 cm by 5 cm), and then subtract. Or they may cut the area into two rectangles, find the area of each one, and add.
- b. 50 cm