Key

/12
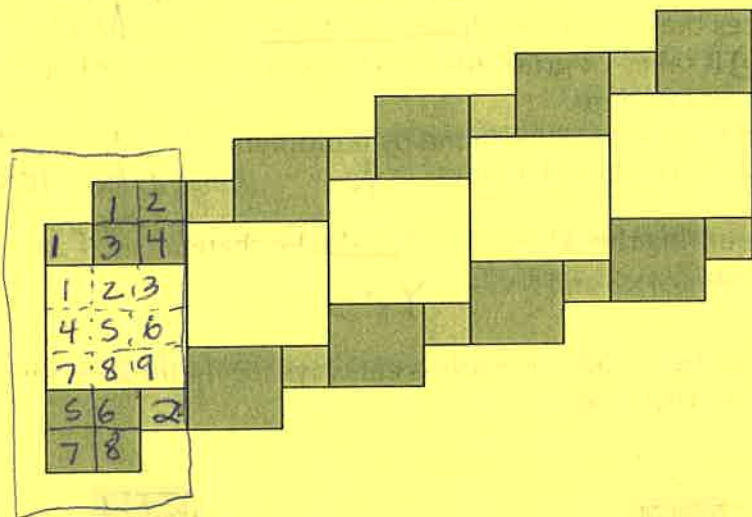
NAME   DATE   PERIOD

Unit 1, Lesson 1: Tiling the Plane

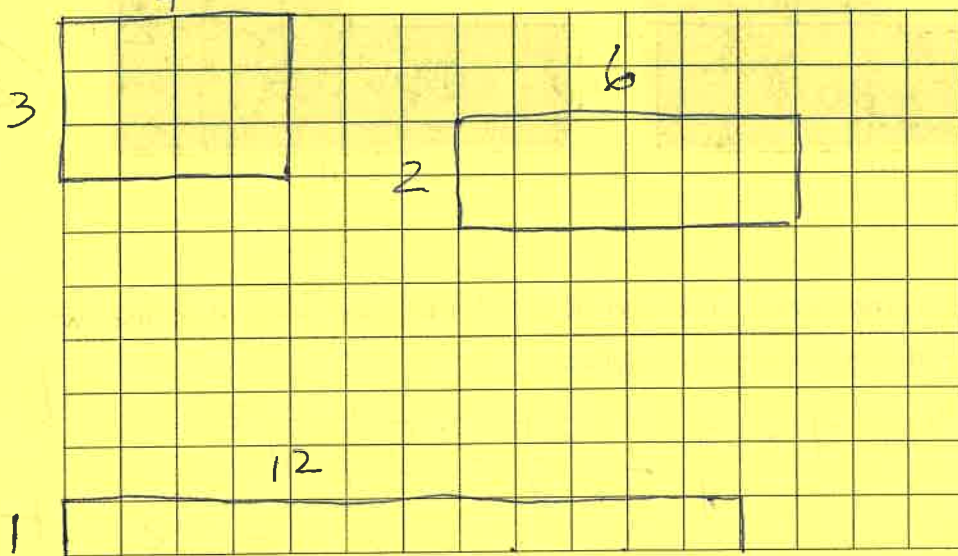1. Which square—large, medium, or small—covers more of the plane? Explain your reasoning.

small = 1 unit
medium = 4 units
large = 9 units

/2

so   small = 2 units
medium = 8 units
large = 9 units

OR
small = 10 units
medium = 40 units
large = 45 units

2. Draw three different quadrilaterals, each with an area of 12 square units.

4 sides
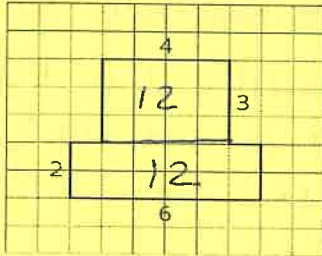total of
12 unit
squares each

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3. The area of this shape is 24 square units. Which of these statements is true about the area? Select **all** that apply.

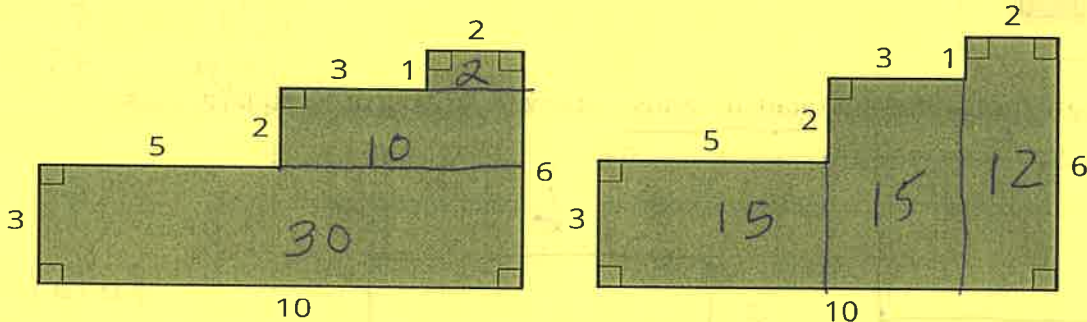a) The area can be found by counting the number of squares that touch the edge of the shape. *NO*

b) It takes 24 grid squares to cover the shape without gaps and overlaps.

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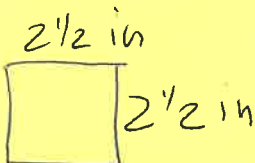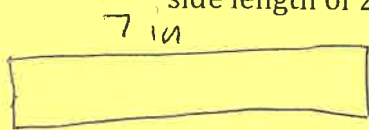c) The area can be found by multiplying the sides lengths that are 6 units and 4 units. *No would be too big*

d) The area can be found by counting the grid squares inside the shape. *Yes*

e) The area can be found by adding 4×3 and 6×2. *Yes*

4. Here are two copies of the same figure. Show two different ways for finding the area of the shaded region. All angles are right angles.

/2

5. Which shape has a larger area: a rectangle that is 7 inches by $\frac{3}{4}$ inch, or a square with side length of $2\frac{1}{2}$ inches? Show your reasoning.

7 in

3/4 in $7 \times \frac{3}{4} = \frac{21}{4} = 5\frac{1}{4}$ in^2

bonus

2½ in

2½ in $2\frac{1}{2} \times 2\frac{1}{2} = 6.25$ in^2

+1