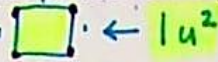~~ Unit 6, Page *18* ~~

Objectives: I can calculate areas using right triangles and rectangles.

Areas of Irregular Polygons Using Right Triangles and Rectangles

Notes:

Consider the horizontal or vertical distance between two adjacent dots to be 1 unit. The area of a square with side lengths of 1 unit is 1 square unit. → ☐ ← $1u^2$

Find the area of each polygon. You must use right triangles and rectangles. Show all work.

Unit Key

$1u^2$

$\frac{1}{2}u^2$

$2u^2$

$1u^2$

$3u^2$

$1.5u^2$

and so on...

1. $6u^2$ — 2, 3

2. half, $6u^2$, half, $\frac{12u^2}{2}$ — 3, 3, 4, 4

3. rearranged! $3u^2$, $\frac{6u^2}{2}$ — 3, 3, 2

4. $\frac{4u^2}{2}$, $2u^2$ half, half — 4, 4

5. $8-2$, $6u^2$ — 2, 1, 1

6. 1.5, $9-3$, $6u^2$, 1.5 — 3

7. $6-2$, $4u^2$ — 2, 3, 1, 1

8. .5, $6-2$, .5, $4u^2$, .5 — 2, .5

9. $11\frac{2}{2}$ $12-5\frac{1}{2}$, .5, 2, 1, $8-4\frac{1}{2}$, $3\frac{1}{2}u^2$ — 4, 2, 1

10. $6\frac{1}{2}u^2$, 1, 1, .5, 1, 1, 1 — 3, 4

11. 2, .5, $\frac{6}{-3}$, $3u^2$, 1, .5, 1 — 3, 4

12. .5, 1, 4, .5, 1, 6, $\frac{16}{-8}$, $8u^2$, $\frac{18}{-9}$, $9u^2$ — 4, 4, 6

13. half, half, $5-2.5 = 2.5u^2$ — 5, 1

14. 3, 3, 6