## Lesson 3: Lots of Rectangles

* Let’s express the areas of some rectangles.

### 3.1: Math Talk: Many Ways to Area

A rectangle is partitioned into smaller rectangles. Explain why each of these expressions represents the area of the entire rectangle.



$7\left(7+7+4+4\right)$

$7\left(2⋅7+2⋅4\right)$

$7^{2}+7^{2}+4⋅7+4⋅7$

$2\left(7^{2}\right)+2\left(4⋅7\right)$

### 3.2: Representing Areas



Match each figure with one or more expressions for its area. Every shape that looks like a square is a square.

* $2⋅3^{2}$
* $6n^{2}$
* $n^{2}+1^{2}$
* $3^{2}$
* $\left(n+1\right)\left(n+1\right)$
* $\left(2n\right)\left(3n\right)$
* $\left(n+1\right)^{2}$
* $3\left(3+3\right)$
* $n^{2}$
* $\left(n+n\right)\left(n+n+n\right)$
* $3^{2}+3^{2}$

### 3.3: Areas of Rectangles

Complete the table with the length, width, and area of each rectangle.



| rectangle | length (units) | width (units) | area (square units) |
| --- | --- | --- | --- |
| A | $a+4$ |  |  |
| B |  | 2 |  |
| C |  |  |  |
| D |  |  |  |
| E |  |  |  |



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