

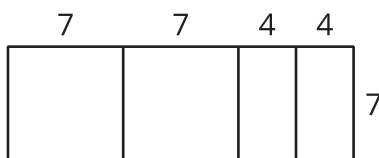


Lots of Rectangles

Let's express the areas of some rectangles.

3.1 Many Ways to Area

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



1. $7(7 + 7 + 4 + 4)$

2. $7(2 \cdot 7 + 2 \cdot 4)$

3. $7^2 + 7^2 + 4 \cdot 7 + 4 \cdot 7$

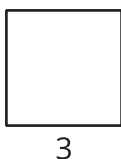
4. $2(7^2) + 2(4 \cdot 7)$



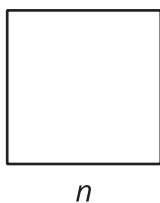
3.2 Representing Areas

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

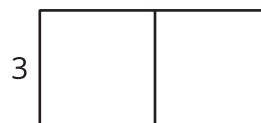
A



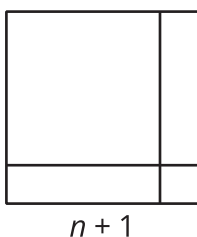
B



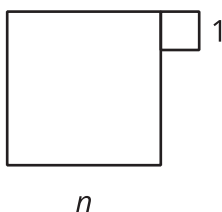
C



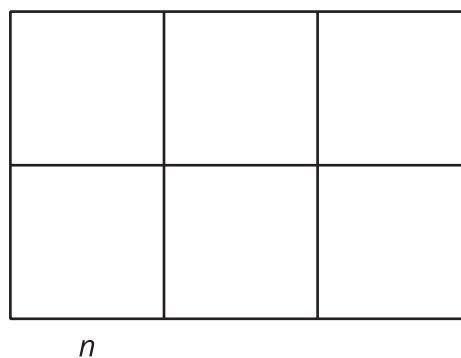
D



E



F



• $2 \cdot 3^2$

• $(n + 1)(n + 1)$

• n^2

• $6n^2$

• $(2n)(3n)$

• $(n + n)(n + n + n)$

• $n^2 + 1^2$

• $(n + 1)^2$

• $3^2 + 3^2$

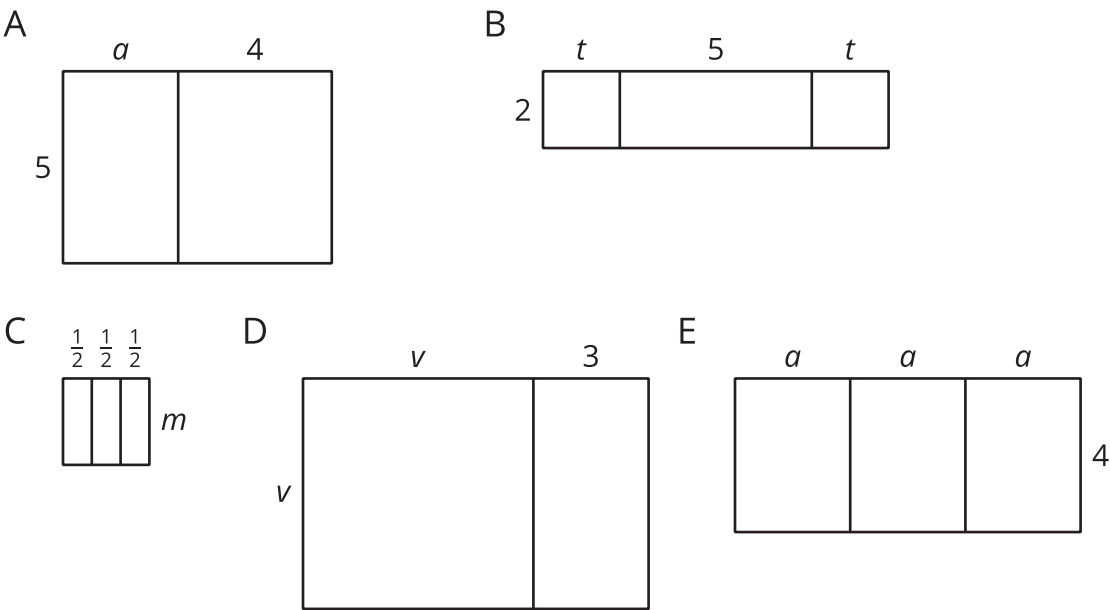
• 3^2

• $3(3 + 3)$

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			