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**8-6.** Write the area of the rectangle at right as a sum and as a product.



**8-7.** Multiply the expressions below using a generic rectangle. Then verify that the product of one diagonal equals the product of the other diagonal, like we did in class.

* 1. (4*x* − 1)(3*x* + 5) b. (2*x* − 7)2

**8-9.** Remember that a Diamond Problem is a pattern for which the **product** of two numbers is placed on top, while the **sum** of the same two numbers is placed on bottom. (This pattern is demonstrated in the diamond below.) Complete each Diamond Problem below.



**8-11.** On graph paper, graph *y* = *x*2 − 2*x* − 8.

* 1. Name the *y*-intercept. What is the connection between the *y*-intercept and the rule *y* = *x*2 − 2*x* − 8?
	2. Name the *x-*intercepts.
	3. Find the lowest point of the graph, called the vertex.

|  |  |
| --- | --- |
| x | y |
|  |  |
|  |  |
|  |  |
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 **7-62.** Use the clues in the graph at right to find a possible corresponding equation in y= abxform.