## Exploring Square Numbers

A square number is a number that can be written as the product of a number multiplied by itself. For example, the square number 9 can be written as $3 * 3$.

(1) Fill in the missing factors and square numbers.

| Factors | Square Number |
| :---: | :---: |
|  | 4 |
| $3 * 3$ | 9 |
| $4 * 4$ | 25 |
|  | 36 |

(2) What pattern(s) do you see in the factors? In the products?
$\qquad$
$\qquad$
(3) What other pattern(s) do you see in the table?
$\qquad$
$\qquad$
(4) Write an equation to describe each array.


Equation: $\qquad$


Equation: $\qquad$
(5) a. Which of the arrays above shows a square number? $\qquad$
b. Explain.

## Practice

(6) $32,45,58$, $\qquad$ , $\qquad$ , $\qquad$

Rule: $\qquad$
(7)
$\qquad$ , $\qquad$ , $\qquad$ $89,115,141$

Rule: $\qquad$

