



# Squares and Equations

Let's explore squares.

## 3.1 Math Talk: Squaring Values

Find the value of each expression mentally.

- $7^2$

- $(-7)^2$

- $-7^2$

- $(-\frac{2}{5})^2$

## 3.2 Squares with Squares

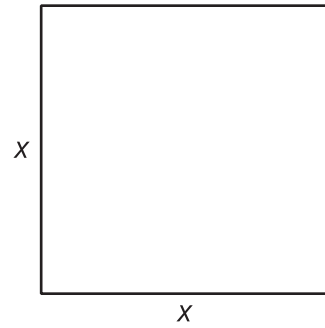
Let  $p^2 = q$ .

1. Select all pairs of values that could be  $p$  and  $q$ .
  - $p = 6, q = 36$
  - $p = -6, q = 36$
  - $p = -2, q = -4$
  - $p = -10, q = 100$
  - $p = \frac{1}{2}, q = \frac{1}{4}$
  - $p = -0.2, q = 0.4$
2. List one other possible pair of values for  $p$  and  $q$  that make the equation true.

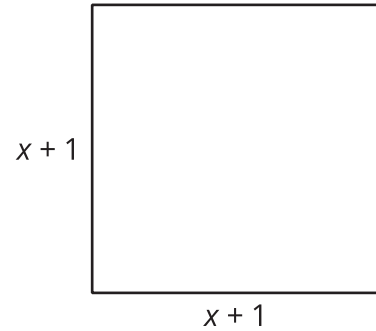


3. Use the diagrams to find the value of the side length for each square, then find the value for  $x$ .

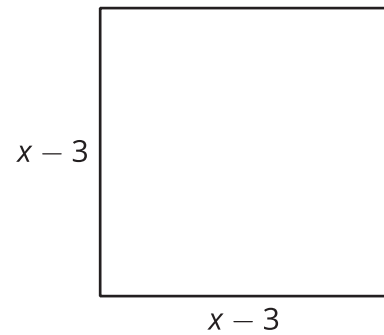
a. The square has an area of 25.



b. The square has an area of 36.



c. The square has an area of 100.



## 3.3

## Matching Solutions and Equations

Here are some equations and a list of numbers. Which numbers are solutions to which equations?

1.  $c^2 = 121$

- -13
- -11
- -10
- -9

2.  $5 \cdot d^2 = 500$

- -7
- 7
- 9
- 10
- 11

3.  $80 = m^2 - 1$

- 13

4.  $100 = (n + 3)^2$