## Lesson 3: Squares and Equations

* Let’s explore squares

### 3.1: Math Talk: Squaring Values

Mentally evaluate each expression.

$7^{2}$

$\left(-7\right)^{2}$

$-7^{2}$

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

### 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 $x$.
* 1. The square has an area of 25.
* 
* 2. The square has an area of 36.
* 
* 3. 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. $c^{2}=121$
2. $5⋅d^{2}=500$
3. $80=m^{2}−1$
4. $100=\left(n+3\right)^{2}$
* -13
* -11
* -10
* -9
* -7
* 7
* 9
* 10
* 11
* 13



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