## Unit 8 Lesson 5: Reasoning About Square Roots

### 1 True or False: Squared (Warm up)

#### Student Task Statement

Decide if each statement is true or false.

$\left(\sqrt{5}\right)^{2}=5$

$\left(\sqrt{9}\right)^{2}=3$

$7=\left(\sqrt{7}\right)^{2}$

$\left(\sqrt{10}\right)^{2}=100$

$\left(\sqrt{16}\right)=2^{2}$

### 2 Square Root Values

#### Student Task Statement

What two whole numbers does each square root lie between? Be prepared to explain your reasoning.

1. $\sqrt{7}$
2. $\sqrt{23}$
3. $\sqrt{50}$
4. $\sqrt{98}$

### 3 Solutions on a Number Line

#### Student Task Statement

The numbers $x$, $y$, and $z$ are positive, and $x^{2}=3$, $y^{2}=16$, and $z^{2}=30$.



1. Plot $x$, $y$, and $z$ on the number line. Be prepared to share your reasoning with the class.
2. Plot $-\sqrt{2}$ on the number line.



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