

# Algebra I

## 11-3

### Rational Square Roots

#### Square Roots -

What is  $\sqrt{49}$  ? 7

Why? Because  $(7)(7) = 49$  or  $7^2 = 49$

What about  $\sqrt{49} = -7$ ? No, answer can't be negative (by definition)

What about  $\sqrt{-49}$  ?  $\emptyset$

What about  $-\sqrt{49}$  ? -7

What are the first 20 perfect squares?

- |         |         |
|---------|---------|
| 1) 1    | 11) 121 |
| 2) 4    | 12) 144 |
| 3) 9    | 13) 169 |
| 4) 16   | 14) 196 |
| 5) 25   | 15) 225 |
| 6) 36   | 16) 256 |
| 7) 49   | 17) 289 |
| 8) 64   | 18) 324 |
| 9) 81   | 19) 361 |
| 10) 100 | 20) 400 |

#### Sample Questions

Find the indicated square roots. (pg 518)

\*1)  $\pm\sqrt{121}$   
 $\pm 11$

\*2)  $-\sqrt{0.0025}$   
 $-0.05$

\*3)  $\sqrt{\frac{4}{9}} = \frac{2}{3}$

\*4)  $\pm\sqrt{\frac{18}{98}}$   
 $\pm\sqrt{\frac{2 \cdot 9}{2 \cdot 49}} = \pm\sqrt{\frac{9}{49}}$   
 $\pm\frac{3}{7}$

radical is a grouping symbol

\*5)  $\sqrt{25-9} = \sqrt{16} = 4$

\*6)  $\sqrt{\frac{16}{81}} = \frac{4}{9}$   ~~$\frac{2}{3}$~~

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1-48 all

Reminder:

You **WILL** need a calculator tomorrow!