

11.3-11.4

Square Roots

Roots Review

Parts of a Root

$$\sqrt{4}$$

Roots Review

Parts of a Root

$$\sqrt[2]{4}$$

Roots Review

Perfect Roots that you should memorize

$\sqrt{1}$	$\sqrt{49}$	$\sqrt{169}$
$\sqrt{4}$	$\sqrt{64}$	$\sqrt{196}$
$\sqrt{9}$	$\sqrt{81}$	$\sqrt{225}$
$\sqrt{16}$	$\sqrt{100}$	$\sqrt{256}$
$\sqrt{25}$	$\sqrt{121}$	$\sqrt{400}$
$\sqrt{36}$	$\sqrt{144}$	$\sqrt{625}$

Lesson

$$\sqrt{64}$$

$$-\sqrt{64}$$

$$\pm\sqrt{64}$$

Special property of roots

$$\sqrt{5^2}$$

$$\sqrt{5^2}$$

Special property of roots

$$\sqrt{3^2}$$

$$\sqrt{3^2}$$

Simplifying Square Roots

Product Property of Square Roots

$$\sqrt{a \cdot b} = \sqrt{a} \cdot \sqrt{b}$$

$$\sqrt{36}$$

$$-\sqrt{900}$$

Simplifying Square Roots

$$\pm\sqrt{1225}$$

Simplifying Square Roots

Quotient Property of Square Roots

$$\sqrt{\frac{a}{b}} = \frac{\sqrt{a}}{\sqrt{b}}$$

$$\sqrt{\frac{36}{121}}$$

Simplifying Square Roots

$$\sqrt{\frac{64}{169}}$$

$$\sqrt{\frac{49}{625}}$$

Simplifying Square Roots

$$\sqrt{\frac{18}{32}}$$

Rational Numbers REVISITED

- Can be turned into a fraction
- Has a perfect square root

$$\sqrt{3}$$

Numbers that DON'T follow this are
known as

IRRATIONAL

Simplifying Irrational Square Roots

$$\sqrt{75}$$

$$\sqrt{216}$$

Simplifying Irrational Square Roots

$$3\sqrt{28}$$

$$7\sqrt{125}$$

Simplifying Irrational Square Roots

$$6\sqrt{112}$$

Simplifying Irrational Square Roots

$$5\sqrt{891}$$