

Unit 9
Simplify Radicals



What about variables?

$$\sqrt{x^6} = x^3$$

$$\sqrt{x^4} = x^2$$

$$\sqrt{x^9} = x^4 \sqrt{x}$$

(x x x x x x x x x)

$$a^2 \sqrt{a^6}$$

a² √(a a a a a a)

$$a^5$$

$$b^5 \sqrt{b^2}$$

$$b^6$$

$$a^6 b^7 \sqrt{a^2 b^{13}}$$

$$a^7 b^3 \sqrt{b}$$

Let's put it all together now!

$$\sqrt{16x^8}$$

$$4x^4$$

$$\sqrt{32x^6}$$

$$2x^3 \sqrt{2}$$

$$2\sqrt{18x^9}$$

(6 3)
(2 3)

$$6x^4 \sqrt{2x}$$

Partner Practice!

$$\sqrt{64x^5}$$

$$8x^2 \sqrt{x}$$

$$\sqrt{24x^{10}y^3}$$

6 4
(2 3) (2 1)

$$2x^5 y \sqrt{6y}$$

$$xy \sqrt{100x^8y^9}$$

$$10x^5 y^5 \sqrt{y}$$