Simplify each without a calculator. Give answer without exponents that are negative or decimals.

1. 
$$(-64)^{-\frac{2}{3}} = (3(-64)^{-2} = (-4)^{2} = (-4)^{2} = 16$$

2. 
$$\left(m^{\frac{7}{6}}n^{-12}\right)^{\frac{4}{3}} = M^{\frac{7}{6} \cdot \frac{4}{3}} \cdot N^{-12 \cdot \frac{4}{3}}$$

The radical symbol indicates the Principal Root.

Positive if there are two roots

**DEFINITELY POSITIVE:** 



COULD BE POS OR NEG:

Absolute Value symbols are needed when

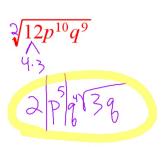
Taking Even Roots whose answers have Odd Exponents.

Simplify each. Use absolute value symbols when needed.

1.



2.



- 18.5 3/j6.j
- 2j2k3/2jk2

- Hwk #2:
- Sec 7-1
- Pages 372-373
- Problems: 23, 27, 43 45, 50

3.  $\sqrt{x^{40}y^{21}z^{15}}$ 4.  $\sqrt{k^{41}j^{29}}$   $\sqrt{5}y^{2}|z|}\sqrt{5}z^{7}$ Simplify. Assume all variables are positive.  $\sqrt{m^{12}n^{23}p^{6}}$ ARSOLUTE VALUE SYMBOLS

## Sec 7-2. Multiplying and Dividing Radical Expressions

Simplify each.

1.  $\sqrt{12} \cdot \sqrt{18}$ 



 $\sqrt{12} \cdot \sqrt{18}$ 

V 216

14.3 19.2 2:13.3:16