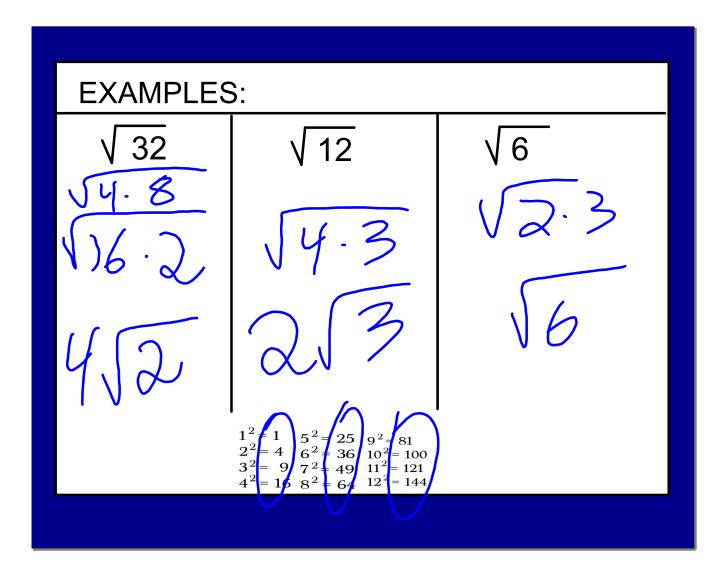
# SIMPLIFYING SQUARE ROOTS PERFECT SQUARES $1^{2} \neq 1$ $2^{2} = 4$ $3^{1} = 9$ $4^{1} = 16$ $5^{1} = 25$ $6^{2} = 36$ $7^{2} = 49$ $8^{2} = 64$ $9^{2} \neq 81$ 3. Simplify to constant the proof of the





## **ADD-SUB RADICALS**

FOR ADDING & SUBTRACTING RADICALS
THEY MUST BE <u>PERFECT MATCHES</u>

$$1\sqrt{2} + 3\sqrt{2} =$$

$$4\sqrt{2}$$

$$\sqrt{5} - \sqrt{2} = \sqrt{3}$$

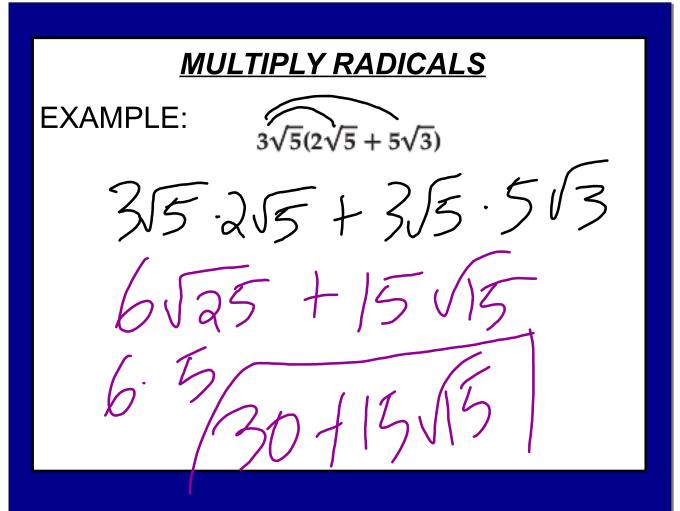
$$\sqrt{6}\sqrt{4}$$

# MULTIPLY RADICALS MULTIPLY OUTSIDE & INSIDE, THEN SIMPLIFY CORRECTLY

$$\sqrt{2} \cdot \sqrt{6} = 3\sqrt{5} \cdot 2\sqrt{2} = \sqrt{3} \cdot \sqrt{3} = \sqrt{3}$$

$$\sqrt{4} \cdot \sqrt{3}$$

$$\sqrt{4} \cdot \sqrt{3}$$



# **DIVIDING RADICALS**

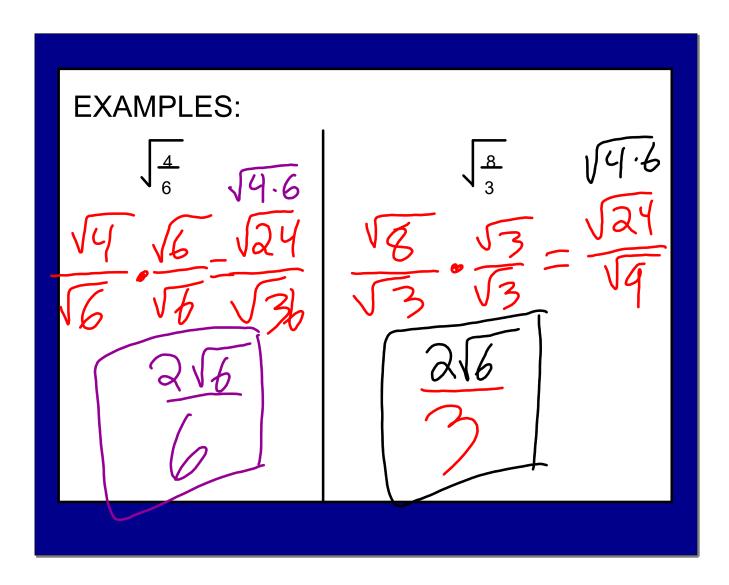
FOR DIVIDING RADICALS THEY MUST ALSO

HAVE THE <u>SAME ROOT</u>

1. Give Root to Top & Bittom

2. Multiply by Fayor of One - Using bottom root -

3. Simplify + Leave Behink



### **VARIABLES & RADICALS**

VARIABLES CAN APPEAR IN RADICALS,

BUT DO NOT CHANGE THE OPERATION.

THEY ONLY CHANGE THE SIMPLIFYING

1. Operation 1st

2. Expand Variables x2-7XX

3. Simplify by making pairs

