

$$1^2 = 1 \quad 2^2 = 4 \quad 3^2 = 9 \quad 4^2 = 16 \quad 5^2 = 25$$

$$6^2 = 36 \quad 7^2 = 49 \quad 8^2 = 64 \quad 9^2 = 81 \quad 10^2 = 100$$

$$11^2 = 121 \quad 12^2 = 144 \quad 13^2 = 169 \quad 14^2 = 196 \quad 15^2 = 225$$

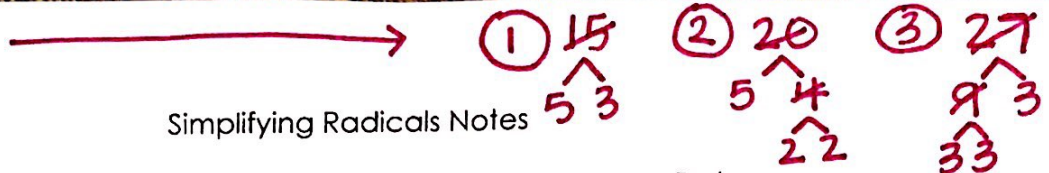
$$16^2 = 256 \quad 17^2 = 289 \quad 18^2 = 324 \quad 19^2 = 361 \quad 20^2 = 400$$

$$21^2 = 441 \quad 22^2 = 484 \quad 23^2 = 529 \quad 24^2 = 576 \quad 25^2 = 625$$

$$26^2 = 676 \quad 27^2 = 729 \quad 28^2 = 784 \quad 29^2 = 841 \quad 30^2 = 900$$

the PERFECT Squares

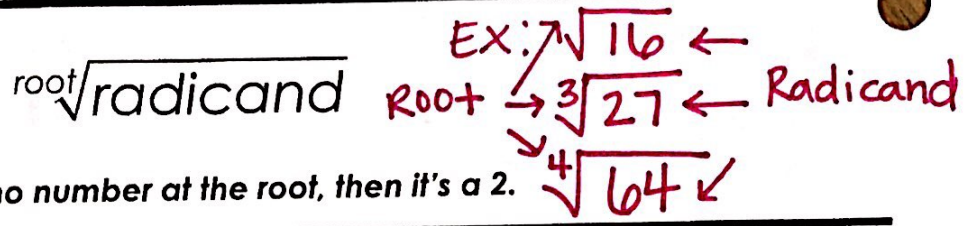
FACTOR TREES:



Simplifying Radicals Notes

Name _____ Date _____

Parts of a Radical



If there's no number at the root, then it's a 2.

Simplify Radicals

- Prime Factor
- Circle groups of the root and bring them out
- If you bring out more than one, multiply
- Multiply the remaining "singles" both inside and outside the radical symbol.

- ① Make a Factor Tree
- ② Circle all Pairs
- ③ Pairs go OUTSIDE, Leftovers go INSIDE
- ④ Simplify inside/outside (Multiply)

Examples:

1. $\sqrt{64} = 8$

2. $\sqrt{45} = 3\sqrt{5}$

3. $\sqrt{72} = 2 \cdot 3 \sqrt{2} = 6\sqrt{2}$

4. $\sqrt{9} = 3$

5. $5\sqrt{8} = 5 \cdot 2\sqrt{2} = 10\sqrt{2}$

6. $7\sqrt{20} = 7 \cdot 2\sqrt{5} = 14\sqrt{5}$

7. $7\sqrt{25} = 7 \cdot 5 = 35$

8. $3\sqrt{150} = 3 \cdot 5 \sqrt{3 \cdot 2} = 15\sqrt{6}$

9. $\sqrt{17}$

10. $-8\sqrt{12} = -8 \cdot 2\sqrt{3} = -16\sqrt{3}$