

## 1.6 Exponents

base <sup>3</sup> exponent

$$2 \cdot 2 \cdot 2$$

$$4 \cdot 2$$

$$8$$

$$4^2 = 4 \cdot 4$$

$$16$$

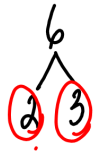
$$2^5 = 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2$$

$$32$$

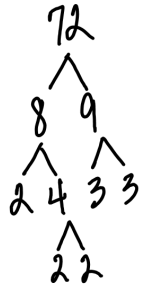
$$x^5 y^3 z = x \cdot x \cdot x \cdot x \cdot x \cdot y \cdot y \cdot y \cdot z$$

$$a^3 b^2 = a \cdot a \cdot a \cdot b \cdot b$$

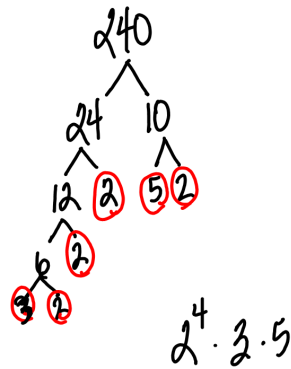
# Prime Factorization



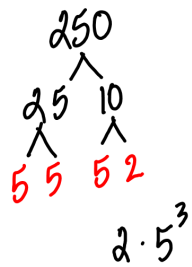
$$2 \cdot 3$$



$$2^3 \cdot 3^2$$



$$2^4 \cdot 5 \cdot 7$$



$$2 \cdot 5^3$$

$$a^2bc$$

$$a = 5$$

$$b = 2$$

$$c = 3$$

$$5^2(2)(3)$$

$$(25)(2)(3)$$

$$50(3)$$

$$150$$

$$a^3 b^2 c$$

$$2^3 (3^2) (8)$$

$$8 (9) (8)$$

$$72 (8)$$

$$576$$

$$a = 2$$

$$b = 3$$

$$c = 8$$

$$\begin{array}{r} 72 \\ \times 8 \\ \hline 576 \end{array}$$

19  
Prime

$\varphi 48$

$1, e^{-42E}$

