

$$\left(\frac{2^0}{b^2} \right)^{-5} = \frac{(2^0)^{-5}}{(b^2)^{-5}}$$

$$\frac{1}{1^5} = 1^{-5} = 1$$

$$\left(\frac{2}{b} \right)^n = \frac{2^n}{b^n}$$

$$(2^m)^n = 2^{m \cdot n}$$

$$2^0 = 1$$

$$= \frac{2^{0 \cdot (-5)}}{b^{2 \cdot (-5)}}$$

$$2^{-n} = \frac{1}{2^n}$$

$$= \frac{2^0}{b^{-10}} = \frac{1}{b^{-10}} = b^{-(-10)} = b^{10}$$

$$\left(\frac{2^0}{6^2}\right)^{-5} = \left(\frac{1}{6^2}\right)^{-5}$$

$$= \left(6^2\right)^5 = 6^{10}$$

$$\frac{1}{2^5} \cdot (2^3)^4 \cdot \frac{1}{4(2^2)^3} = \frac{1}{2^5} \cdot (2^3)^4 \cdot \frac{1}{2^2 \cdot (2^2)^3}$$

2 4 8 16 32 64

2^1 2^2 2^3 2^4 2^5 2^6

$$(2^m)^n = 2^{m \cdot n}$$

$$(2 \cdot 6)^n = 2^n 6^n$$

$$= \frac{1}{2^5} \cdot 2^4 \cdot (2^3)^4 \cdot \frac{1}{2^2 \cdot 2^{2 \cdot 3}}$$

$$= \frac{1}{2^5} \cdot 2^4 \cdot 2^{3 \cdot 4} \cdot \frac{1}{2^2 \cdot 2^6} = \frac{1}{2^5} \cdot \frac{2^4}{1} \cdot \frac{2^{12}}{1} \cdot \frac{1}{2^2 \cdot 2^6}$$

$$= \frac{1 \cdot 2^4 \cdot 2^{12} \cdot 1}{2^5 \cdot 1 \cdot 1 \cdot 2^2 \cdot 2^6} = \frac{2^4 \cdot 2^{12}}{2^5 \cdot 2^2 \cdot 2^6} = \frac{2^4 \cdot 2^{12}}{2^2 (2^5 \cdot 2^6)}$$

$$= \frac{2^4 \cdot 2^{12}}{2^2 \cdot 2^{11}} = \left(\frac{2^4}{2^2} \right) \cdot \left(\frac{2^{12}}{2^{11}} \right)$$

$$2^m \cdot 2^n = 2^{m+n}$$

$$\frac{2^m}{2^n} = 2^{m-n}$$

$$= 2^{4-2} 2^{12-11} = 2^2 \cdot 2^1 = 4 \cdot 2 = 2^2 \cdot 2$$