Negative Exponents

Remember $10^{-2} = \frac{1}{10^2} = \frac{1}{100}$

Take the Reciprocal when you have negative exponents!

+ exponents	Negative Exponents
① $9^2 = 9 \cdot 9 = 81$	$9^{-2} = \frac{1}{9^2} = \frac{1}{9 \cdot 9} = \frac{1}{81}$
② $4^3 = 4 \cdot 4 \cdot 4 = 64$	$4^{-3} = \frac{1}{4^3} \quad \frac{1}{4 \cdot 4 \cdot 4} = \frac{1}{64}$
③ $2^4 = 2 \cdot 2 \cdot 2 \cdot 2 = 16$	$2^{-4} = \frac{1}{2^4} = \frac{1}{2 \cdot 2 \cdot 2 \cdot 2} = \frac{1}{16}$
④ $\left(\frac{2}{3}\right)^3 = \left(\frac{2 \cdot 2 \cdot 2}{3 \cdot 3 \cdot 3}\right) = \frac{8}{27}$	$\left(\frac{2}{3}\right)^{-3} = \left(\frac{3 \cdot 3 \cdot 3}{2 \cdot 2 \cdot 2}\right) = \frac{27}{8} = 3\frac{3}{8}$
⑤ $\left(\frac{3}{4}\right)^2 = \left(\frac{3 \cdot 3}{4 \cdot 4}\right) = \frac{9}{16}$	$\left(\frac{3}{4}\right)^{-2} \left(\frac{4 \cdot 4}{3 \cdot 3}\right) = \frac{16}{9} = 1\frac{7}{9}$

* $-(3)^2 = -(3 \cdot 3) = -9$
* $(-3)^2 = -3 \cdot -3 = +9$
* $-3^2 = -(3 \cdot 3) = -9$