

Practice with Exponents

Complete the table by raising each base to each exponent. Some example entries are provided.

Exponents across → Bases down ↓	-3	-1	0	2	3
0	$0^{-3} = \frac{1}{0^3}$ undefined	$0^{-1} = \frac{1}{0^1} = \frac{1}{0}$ <u>undef</u>	0^0 indeterminate	$0^2 = \boxed{0}$	$0^3 = \boxed{0}$
1	$1^{-3} = \frac{1}{1^3} = \frac{1}{1} = \boxed{1}$	$1^{-1} = \frac{1}{1^1} = \boxed{1}$	$1^0 = \boxed{1}$	$1^2 = \boxed{1}$	$1^3 = \boxed{1}$
2	$2^{-3} = \frac{1}{2^3} = \boxed{\frac{1}{8}}$	$2^{-1} = \frac{1}{2^1} = \frac{1}{2}$	$2^0 = \boxed{1}$	$2^2 = \boxed{4}$	$2^3 = \boxed{8}$
3	$3^{-3} = \frac{1}{3^3} = \boxed{\frac{1}{27}}$	$3^{-1} = \boxed{\frac{1}{3}}$	$3^0 = 1$	$3^2 = \boxed{9}$	$3^3 = \boxed{27}$
4	$4^{-3} = \frac{1}{4^3} = \boxed{\frac{1}{64}}$	$4^{-1} = \boxed{\frac{1}{4}}$	$4^0 = \boxed{1}$	$4^2 = \boxed{16}$	$4^3 = \boxed{64}$
5	$5^{-3} = \frac{1}{5^3} = \boxed{\frac{1}{125}}$	$5^{-1} = \boxed{\frac{1}{5}}$	$5^0 = \boxed{1}$	$5^2 = 25$	$5^3 = \boxed{125}$
6	$6^{-3} = \frac{1}{6^3} = \boxed{\frac{1}{216}}$	$6^{-1} = \boxed{\frac{1}{6}}$	$6^0 = \boxed{1}$	$6^2 = \boxed{36}$	$6^3 = 216$
-1	$(-1)^{-3} = \frac{1}{(-1)^3} = -1$	$(-1)^{-1} = \frac{1}{-1} = \boxed{-1}$	$(-1)^0 = \boxed{1}$	$(-1)^2 = \boxed{1}$	$(-1)^3 = \boxed{-1}$
-2	$(-2)^{-3} = \frac{1}{(-2)^3} = \frac{1}{-8} = \boxed{-\frac{1}{8}}$	$(-2)^{-2} = \frac{1}{-2} = \boxed{-\frac{1}{2}}$	$(-2)^0 = \boxed{1}$	$(-2)^2 = \boxed{4}$	$(-2)^3 = \boxed{-8}$
-3	$(-3)^{-3} = \frac{1}{(-3)^3} = \frac{1}{-27} = \boxed{-\frac{1}{27}}$	$(-3)^{-1} = \frac{1}{-3} = -\frac{1}{3}$	$(-3)^0 = \boxed{1}$	$(-3)^2 = \boxed{9}$	$(-3)^3 = \boxed{-27}$
-4	$(-4)^{-3} = \frac{1}{(-4)^3} = \frac{1}{-64} = \boxed{-\frac{1}{64}}$	$(-4)^{-1} = \frac{1}{-4} = \boxed{-\frac{1}{4}}$	$(-4)^0 = \boxed{1}$	$(-4)^2 = \boxed{16}$	$(-4)^3 = \boxed{-64}$
$\frac{1}{2}$	$\left(\frac{1}{2}\right)^{-3} = \left(\frac{2}{1}\right)^3 = 8$	$\left(\frac{1}{2}\right)^{-1} = 2^1 = \boxed{2}$	$\left(\frac{1}{2}\right)^0 = \boxed{1}$	$\left(\frac{1}{2}\right)^2 = \boxed{\frac{1}{4}}$	$\left(\frac{1}{2}\right)^3 = \boxed{\frac{1}{8}}$
$\frac{1}{3}$	$\left(\frac{1}{3}\right)^{-3} = (3)^3 = \boxed{27}$	$\left(\frac{1}{3}\right)^{-1} = 3^1 = \boxed{3}$	$\left(\frac{1}{3}\right)^0 = \boxed{1}$	$\left(\frac{1}{3}\right)^2 = \boxed{\frac{1}{9}}$	$\left(\frac{1}{3}\right)^3 = \boxed{\frac{1}{27}}$
$\frac{1}{4}$	$\left(\frac{1}{4}\right)^{-3} = (4)^3 = \boxed{64}$	$\left(\frac{1}{4}\right)^{-1} = \boxed{4}$	$\left(\frac{1}{4}\right)^0 = \boxed{1}$	$\left(\frac{1}{4}\right)^2 = \boxed{\frac{1}{16}}$	$\left(\frac{1}{4}\right)^3 = \boxed{\frac{1}{64}}$
$\frac{1}{5}$	$\left(\frac{1}{5}\right)^{-3} = 5^3 = \boxed{125}$	$\left(\frac{1}{5}\right)^{-1} = \boxed{5}$	$\left(\frac{1}{5}\right)^0 = \boxed{1}$	$\left(\frac{1}{5}\right)^2 = \boxed{\frac{1}{25}}$	$\left(\frac{1}{5}\right)^3 = \boxed{\frac{1}{125}}$
$-\frac{1}{2}$	$\left(-\frac{1}{2}\right)^{-3} = (-2)^3 = \boxed{-8}$	$\left(-\frac{1}{2}\right)^{-1} = (-2)^1 = \boxed{-2}$	$\left(-\frac{1}{2}\right)^0 = \boxed{1}$	$\left(-\frac{1}{2}\right)^2 = \boxed{\frac{1}{4}}$	$\left(-\frac{1}{2}\right)^3 = \boxed{-\frac{1}{8}}$
$-\frac{1}{3}$	$\left(-\frac{1}{3}\right)^{-3} = (-3)^3 = \boxed{-27}$	$\left(-\frac{1}{3}\right)^{-1} = (-3)^1 = \boxed{-3}$	$\left(-\frac{1}{3}\right)^0 = \boxed{1}$	$\left(-\frac{1}{3}\right)^2 = \boxed{\frac{1}{9}}$	$\left(-\frac{1}{3}\right)^3 = \boxed{-\frac{1}{27}}$
$-\frac{1}{4}$	$\left(-\frac{1}{4}\right)^{-3} = \left(-\frac{4}{1}\right)^3 = -64$	$\left(-\frac{1}{4}\right)^{-1} = (-4)^1 = \boxed{-4}$	$\left(-\frac{1}{4}\right)^0 = \boxed{1}$	$\left(-\frac{1}{4}\right)^2 = \boxed{\frac{1}{16}}$	$\left(-\frac{1}{4}\right)^3 = \boxed{-\frac{1}{64}}$
$-\frac{1}{5}$	$\left(-\frac{1}{5}\right)^{-3} = (-5)^3 = \boxed{-125}$	$\left(-\frac{1}{5}\right)^{-1} = (-5)^1 = \boxed{-5}$	$\left(-\frac{1}{5}\right)^0 = \boxed{1}$	$\left(-\frac{1}{5}\right)^2 = \boxed{\frac{1}{25}}$	$\left(-\frac{1}{5}\right)^3 = \boxed{-\frac{1}{125}}$