

# Potenzieren von negativen Zahlen

Lösungsblatt

$(-4)^3 = (-4) \cdot (-4) \cdot (-4) = -64$
$(-5)^4 = (-5) \cdot (-5) \cdot (-5) \cdot (-5) = +625$
$(-3)^2 = (-3) \cdot (-3) = +9$
$(-2)^6 = (-2) \cdot (-2) \cdot (-2) \cdot (-2) \cdot (-2) = +64$
$(-6)^3 = (-6) \cdot (-6) \cdot (-6) = -216$

$(-3)^2 \cdot (-3) = (-3)^3 = -27$
$(-2)^3 \cdot (-2)^2 = (-2)^5 = -32$
$(-5)^2 \cdot (-5)^2 = (-5)^4 = +625$
$(-4)^1 \cdot (-4)^3 = (-4)^4 = +256$
$(-1) \cdot (-1)^4 = (-1)^5 = -1$

$\left(-\frac{2}{3}\right)^3 = \left(-\frac{2}{3}\right) \cdot \left(-\frac{2}{3}\right) \cdot \left(-\frac{2}{3}\right) = -\frac{8}{27}$
$\left(-\frac{1}{8}\right)^2 = \left(-\frac{1}{8}\right) \cdot \left(-\frac{1}{8}\right) = +\frac{1}{64}$
$\left(-\frac{2}{5}\right)^3 = \left(-\frac{2}{5}\right) \cdot \left(-\frac{2}{5}\right) \cdot \left(-\frac{2}{5}\right) = -\frac{8}{125}$
$\left(-\frac{1}{3}\right)^4 = \left(-\frac{1}{3}\right) \cdot \left(-\frac{1}{3}\right) \cdot \left(-\frac{1}{3}\right) \cdot \left(-\frac{1}{3}\right) = +\frac{1}{81}$
$\left(-\frac{3}{4}\right)^3 = \left(-\frac{3}{4}\right) \cdot \left(-\frac{3}{4}\right) \cdot \left(-\frac{3}{4}\right) = -\frac{27}{64}$

$\left(-\frac{1}{4}\right)^2 \cdot \left(-\frac{1}{4}\right) = \left(-\frac{1}{4}\right)^3 = -\frac{1^3}{4^3} = -\frac{1}{64}$
$\left(-\frac{2}{3}\right)^4 \cdot \left(-\frac{2}{3}\right) = \left(-\frac{2}{3}\right)^5 = -\frac{2^5}{3^5} = -\frac{32}{243}$
$\left(-\frac{3}{4}\right) \cdot \left(-\frac{3}{4}\right)^3 = \left(-\frac{3}{4}\right)^4 = +\frac{3^4}{4^4} = +\frac{81}{256}$
$\left(-\frac{1}{2}\right)^5 \cdot \left(-\frac{1}{2}\right)^2 = \left(-\frac{1}{2}\right)^7 = -\frac{1^7}{2^7} = -\frac{1}{128}$
$\left(-\frac{2}{5}\right)^3 \cdot \left(-\frac{2}{5}\right) = \left(-\frac{2}{5}\right)^4 = +\frac{2^4}{5^4} = +\frac{16}{625}$

$(-1,5)^2 = (-1,5) \cdot (-1,5) = +2,25$
$(-3,7)^2 = (-3,7) \cdot (-3,7) = +13,69$
$(-2,5)^3 = (-2,5) \cdot (-2,5) \cdot (-2,5) = -15,625$
$(-5,6)^2 = (-5,6) \cdot (-5,6) = +31,36$
$(-1,8)^3 = (-1,8) \cdot (-1,8) \cdot (-1,8) = -5,832$

$(-4)^2 + (-2)^3 - (-3)^2 = 16 - 8 - 9 = -1$
$(-3)^2 + (-4)^3 + (-5)^2 = 9 - 64 + 25 = -30$
$(-3)^3 - (-2)^4 + (-2)^2 = -27 - 16 + 4 = -39$
$(-1)^{13} + (-1)^6 + (-1)^{17} = -1 + 1 - 1 = -1$
$(-6)^2 - (-3)^3 + (-2)^4 = 36 + 27 + 16 = +79$

-1	$-\frac{32}{243}$	+625	-	$-\frac{8}{125}$	-30	$+\frac{16}{625}$	+625	+13,69	+64	$-\frac{27}{64}$	-1
-216	-39	$+\frac{1}{64}$	-32	-5,832	$+\frac{81}{256}$	+9	+79	$+\frac{1}{81}$	$-\frac{1}{128}$	+31,36	+256