

Scheda di lavoro sulle potenze di frazioni. Base. Completi di soluzione guidata.  
*Fractions and exponentiation*

$$a^n = \underbrace{a \cdot a \cdot \dots \cdot a}_{n \text{ volte}} \# a^1 = a \# a^0 = 1 \quad \forall a \neq 0$$

1.	$\frac{2^3}{3} =$	$\frac{2}{3^2} =$	<a href="#">soluzione</a>
2.	$\left(\frac{2}{5}\right)^2 =$	$\left(\frac{1}{4}\right)^0 =$	
3.	$\left(\frac{1}{2}\right)^1 =$	$\left(\frac{2}{3^2}\right)^2 =$	
4.	$\left(1 - \frac{1}{2}\right)^3 =$	$\left(\frac{3}{5}\right)^4 =$	<a href="#">soluzione</a>
5.	$\left(\frac{4}{3}\right)^0 \cdot \left(\frac{4}{3}\right)^1 =$	$\left(\frac{1}{3} - \frac{1}{3}\right)^0 =$	
6.	$\left(\frac{2}{5}\right)^3 =$	$\left(\frac{1^6}{7}\right)^2 =$	
7.	$\left(\frac{2}{3}\right)^2 \cdot \left(\frac{2}{3}\right)^1 \cdot \left(\frac{2}{3}\right)^0 =$	$\left[\left(\frac{2}{3}\right)^0\right]^3 =$	<a href="#">soluzione</a>
8.	$\left(1 - \frac{3}{4}\right)^1 =$	$\frac{3^0}{3} =$	
9.	$\left(\frac{12}{4}\right)^4 =$	$\left(\frac{0}{3}\right)^2 =$	
10.	$\frac{3^1}{3^2} =$	$\left(\frac{1}{2}\right)^4 : \frac{1}{2} =$	<a href="#">soluzione</a>
11.	$\left(\frac{1}{0}\right)^1 =$	$\left[\left(\frac{2}{3}\right)^2\right]^0 =$	
12.	$\left(\frac{2}{4}\right)^4 =$	$\frac{5^2}{90} =$	
13.	$\left(\frac{5}{10}\right)^3 =$	$\left(\frac{9}{27}\right)^2 =$	
14.	$\frac{7}{8} \cdot \left(\frac{1}{4}\right)^0 =$	$\left(\frac{2^1}{3^2}\right)^2 =$	

# Soluzioni

$\frac{2^3}{3} = \frac{2 \cdot 2 \cdot 2}{3} = \frac{8}{3}$ $= \underbrace{a \cdot a \cdot \dots \cdot a}_{n \text{ volte}}$ $a^n$	$\frac{2}{3^2} = \frac{2}{3 \cdot 3} = \frac{2}{9}$
$\left(\frac{2}{5}\right)^2 = \frac{2}{5} \cdot \frac{2}{5} = \frac{4}{25}$	$\left(\frac{1}{4}\right)^0 = 1 \quad \forall a \neq 0; a^0 = 1$
$\left(\frac{1}{2}\right)^1 = \frac{1}{2} \quad a^1 = a$	$\left(\frac{2}{3^2}\right)^2 = \left(\frac{2}{9}\right)^2 = \frac{2^2}{3^2} = \frac{4}{81}$


$\left(1 - \frac{1}{2}\right)^3 = \left(\frac{1}{2}\right)^3 = \frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} = \frac{1}{8}$	$\left(\frac{3}{5}\right)^4 = \frac{3}{4} \cdot \frac{3}{4} \cdot \frac{3}{4} \cdot \frac{3}{4} = \frac{3^3}{4^4} = \frac{81}{625}$
$\left(\frac{4}{3}\right)^0 \cdot \left(\frac{4}{3}\right)^1 = 1 \cdot \frac{4}{3} = \frac{4}{3}$	$\left(\frac{1}{3} - \frac{1}{3}\right)^0 = 0^0$ <p style="text-align: center;"><i>priva di significato</i></p>
$\left(\frac{2}{5}\right)^3 = \frac{2}{5} \cdot \frac{2}{5} \cdot \frac{2}{5} = \frac{2^3}{5^3} = \frac{8}{125}$	$\left(\frac{1^6}{7}\right)^2 = \left(\frac{1}{7}\right)^2 = \frac{1}{49}$ <p style="text-align: center;"><math>1^n = 1</math></p>


$\left(\frac{2}{3}\right)^2 \cdot \left(\frac{2}{3}\right)^1 \cdot \left(\frac{2}{3}\right)^0 = \frac{4}{9} \cdot \frac{2}{3} \cdot 1 = \frac{8}{27}$	$\left(\left(\frac{2}{3}\right)^0\right)^3 = 1^3 = 1$
$\left(1 - \frac{3}{4}\right)^1 = \frac{1}{4}$	$\frac{3^0}{3} = \frac{1}{3}$
$\left(\frac{12}{4}\right)^4 = \left(\frac{12:4}{4:4}\right)^4 = 3^4 = 81$	$\left(\frac{0}{3}\right)^2 = 0$ $\forall a \neq 0; 0 : a = 0$


$\frac{3^1}{3^2} = \frac{3}{9} = \frac{1}{3}$	$\left(\frac{1}{2}\right)^4 : \frac{1}{2} = \frac{1}{16} \cdot 2 = \frac{1}{8}$
$\left(\frac{1}{0}\right)^1 = \textit{impossibile}$	$\left[\left(\frac{2}{3}\right)^2\right]^0 = \left[\frac{4}{9}\right]^0 = 1$
$\left(\frac{2}{4}\right)^4 = \left(\frac{2:2}{4:2}\right)^4 = \left(\frac{1}{2}\right)^4 = \frac{1}{16}$	$\frac{5^2}{90} = \frac{25}{90} = \frac{5}{18}$


$\left(\frac{5}{10}\right)^3 = \left(\frac{1}{2}\right)^3 = \frac{1}{8}$	$\left(\frac{9}{27}\right)^2 = \left(\frac{1}{3}\right)^2 = \frac{1}{9}$
$\frac{7}{8} \cdot \left(\frac{1}{4}\right)^0 = \frac{7}{8} \cdot 1 = \frac{7}{8}$	$\left(\frac{2^1}{3^2}\right)^2 = \frac{4}{81}$


## Keywords

 *Matematica, Aritmetica, Frazioni, Espressioni Q, addizione, sottrazione, moltiplicazione, divisione, esercizi con soluzioni*

 *Math, Arithmetic, Fraction expressions, Fraction, Expression, Addition, Subtraction, Multiplication, Division, Fraction expressions solved*

 *Matemática, Aritmética, Fracción, Expresiones, Resta, Sustracción, Suma, Adición, Multiplicación, División*

 *Mathématique, Arithmétique, Fraction, Problèmes avec fractions, Addition, Soustraction, Multiplication, Division*

 *Mathematik, Arithmetik, Bruchrechnung, Bruch, Subtraktion, Addition, Multiplikation, Division*

Arabic: كَسْر

Chinese (Simplified): 分数

Chinese (Traditional): 分數

Czech: zlomek

Danish: brøkdel

Dutch: deel, breuk

Estonian: murd(arv)

Finnish: murtoluku

French: fraction

Greek: κλάσμα

Hungarian: hányad, tört(rész)

Icelandic: brot

Indonesian: pecahan

Japanese: 分数

Korean: 분수

Lithuanian: trupmena

Norwegian: brøk(del)

Polish: ułamek

Portuguese (Brazil): fração

Portuguese (Portugal): fracção

Romanian: fracție

Russian: дробь

Slovak: zlomek

Slovenian: ulomek

Swedish: del

Turkish: kesir