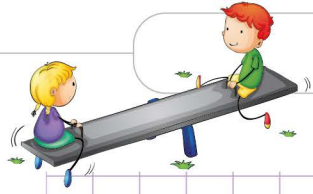


Name: ..... Class: .....



Exponents with fractional bases

Evaluate the following expressions

$$\left(\frac{5}{6}\right)^3 = \frac{(5)^3}{(6)^3}$$

$$= \frac{5 \times 5 \times 5}{6 \times 6 \times 6}$$

$$= \frac{125}{216}$$

$$\left(\frac{3}{4}\right)^4 =$$

$$=$$

$$=$$

$$\left(\frac{52}{97}\right)^0 =$$

$$=$$

$$=$$

$$\left(\frac{5}{3}\right)^5 =$$

$$=$$

$$=$$

$$\left(\frac{1}{2}\right)^7 =$$

$$=$$

$$=$$

$$\left(\frac{3}{8}\right)^2 =$$

$$=$$

$$=$$

$$\left(\frac{10}{4}\right)^1 =$$

$$=$$

$$=$$

$$\left(\frac{7}{9}\right)^2 =$$

$$=$$

$$=$$

$$\left(\frac{4}{7}\right)^2 =$$

$$=$$

$$=$$

In each case, solve and tick **most** the correct answer.

$$\left(\frac{10}{4}\right)^2 = ?$$

$\frac{25}{4}$

$\frac{100}{16}$

$$\left(\frac{3}{4}\right)^6 = ?$$

$\frac{729}{4,096}$

$\frac{729}{4,069}$

$$\left(\frac{3}{5}\right)^3 = ?$$

$\frac{27}{125}$

$\frac{27}{150}$

$$\left(\frac{5}{12}\right)^1 = ?$$

$\frac{12}{5}$

$\frac{5}{12}$

$$\left(\frac{2}{3}\right)^7 = ?$$

$\frac{128}{2,187}$

$\frac{129}{2,187}$

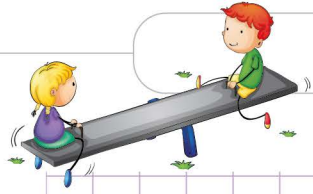
$$\left(\frac{6}{8}\right)^0 = ?$$

$\frac{6}{8}$

1



Name: ..... Class: .....



Exponents with fractional bases

Evaluate the following expressions

$$\left(\frac{5}{6}\right)^3 = \frac{(5)^3}{(6)^3}$$

$$= \frac{5 \times 5 \times 5}{6 \times 6 \times 6}$$

$$= \frac{125}{216}$$

$$\left(\frac{3}{4}\right)^4 = \frac{(3)^4}{(4)^4}$$

$$= \frac{3 \times 3 \times 3 \times 3}{4 \times 4 \times 4 \times 4}$$

$$= \frac{81}{256}$$

$$\left(\frac{52}{97}\right)^0 = \frac{(52)^0}{(97)^0}$$

$$= \frac{1}{1}$$

$$= 1$$

$$\left(\frac{5}{3}\right)^5 = \frac{(5)^5}{(3)^5}$$

$$= \frac{5 \times 5 \times 5 \times 5 \times 5}{3 \times 3 \times 3 \times 3 \times 3}$$

$$= \frac{3,125}{243}$$

$$\left(\frac{1}{2}\right)^7 = \frac{(1)^7}{(2)^7}$$

$$= \frac{1 \times 1 \times 1 \times 1 \times 1 \times 1 \times 1}{2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2}$$

$$= \frac{1}{128}$$

$$\left(\frac{3}{8}\right)^2 = \frac{(3)^2}{(8)^2}$$

$$= \frac{3 \times 3}{8 \times 8}$$

$$= \frac{9}{64}$$

$$\left(\frac{10}{4}\right)^1 = \frac{(10)^1}{(4)^1}$$

$$= \frac{10}{4} = \frac{5}{2}$$

$$= \frac{5}{2}$$

$$\left(\frac{7}{9}\right)^2 = \frac{(7)^2}{(9)^2}$$

$$= \frac{7 \times 7}{9 \times 9}$$

$$= \frac{49}{81}$$

$$\left(\frac{4}{7}\right)^2 = \frac{(4)^2}{(7)^2}$$

$$= \frac{4 \times 4}{7 \times 7}$$

$$= \frac{16}{49}$$

► In each case, solve and tick the **most** correct answer.

$$\left(\frac{10}{4}\right)^2 = ?$$

$\frac{25}{4}$

$\frac{100}{16}$

$$\left(\frac{3}{4}\right)^6 = ?$$

$\frac{729}{4,096}$

$\frac{729}{4,069}$

$$\left(\frac{3}{5}\right)^3 = ?$$

$\frac{27}{125}$

$\frac{27}{150}$

$$\left(\frac{5}{12}\right)^1 = ?$$

$\frac{12}{5}$

$\frac{5}{12}$

$$\left(\frac{2}{3}\right)^7 = ?$$

$\frac{128}{2,187}$

$\frac{129}{2,187}$

$$\left(\frac{6}{8}\right)^0 = ?$$

$\frac{6}{8}$

1

