

Name: Class:

Advanced exponents

Evaluate

$$\left(\frac{5}{6}\right)^{-2} =$$

=

=

$$\left(\frac{9}{2}\right)^6 =$$

=

=

$$\left(\frac{8}{3}\right)^4 =$$

=

=

$$\left(\frac{10}{9}\right)^{-3} =$$

=

=

$$\left(\frac{4}{3}\right)^5 =$$

=

=

$$\left(\frac{12}{5}\right)^3 =$$

=

=

$$\left(\frac{15}{1}\right)^{-1} =$$

=

=

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

=

=

$$\left(\frac{7}{3}\right)^4 =$$

=

=

In each case, solve and tick the correct answer.

$$\left(\frac{8}{5}\right)^{-3} = ?$$

$\frac{125}{512}$

$\frac{512}{125}$

$$\left(\frac{1}{100}\right)^{-1} = ?$$

1

100

$$\left(\frac{7}{5}\right)^{-4} = ?$$

$\frac{125}{204}$

$\frac{625}{2,401}$

$$\left(\frac{3}{2}\right)^{-6} = ?$$

$\frac{-64}{729}$

$\frac{64}{729}$

$$\left(\frac{12}{1}\right)^2 = ?$$

$\frac{1}{144}$

144

$$\left(\frac{1,000}{1}\right)^{-1} = ?$$

$\frac{1}{1,000}$

1,000

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Evaluate

$$\left(\frac{5}{6}\right)^{-2} = \frac{(6)^2}{(5)^2}$$

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

$$= \frac{36}{25}$$

$$\left(\frac{9}{2}\right)^6 = \frac{(2)^6}{(9)^6}$$

$$= \frac{2 \times 2 \times 2 \times 2 \times 2 \times 2}{9 \times 9 \times 9 \times 9 \times 9 \times 9}$$

$$= \frac{64}{531,441}$$

$$\left(\frac{8}{3}\right)^{-4} = \frac{(3)^4}{(8)^4}$$

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

$$= \frac{81}{4,096}$$

$$\left(\frac{10}{9}\right)^{-3} = \frac{(9)^3}{(10)^3}$$

$$= \frac{9 \times 9 \times 9}{10 \times 10 \times 10}$$

$$= \frac{729}{1,000}$$

$$\left(\frac{4}{3}\right)^5 = \frac{(3)^5}{(4)^5}$$

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

$$= \frac{243}{1,024}$$

$$\left(\frac{12}{5}\right)^{-3} = \frac{(5)^3}{(12)^3}$$

$$= \frac{5 \times 5 \times 5}{12 \times 12 \times 12}$$

$$= \frac{125}{1,728}$$

$$\left(\frac{15}{1}\right)^{-1} = \frac{(1)^1}{(15)^1}$$

$$= \frac{1}{15}$$

$$= \frac{1}{15}$$

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

$$= \frac{3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3}{2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2}$$

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

$$\left(\frac{7}{3}\right)^4 = \frac{(3)^4}{(7)^4}$$

$$= \frac{3 \times 3 \times 3 \times 3}{7 \times 7 \times 7 \times 7}$$

$$= \frac{81}{2,401}$$

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

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$\frac{125}{512}$

$\frac{512}{125}$

$$\left(\frac{1}{100}\right)^{-1} = ?$$

1

100

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$$\left(\frac{3}{2}\right)^{-6} = ?$$

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$$\left(\frac{12}{1}\right)^2 = ?$$

$\frac{1}{144}$

144

$$\left(\frac{1,000}{1}\right)^{-1} = ?$$

$\frac{1}{1,000}$

1,000