

Name : _____

Evaluating Exponents

Evaluate each expression.

1) $\left(\frac{2}{5}\right)^3 - \left(\frac{3}{5}\right)^2$

2) $\left(-\frac{1}{6}\right)^4 \cdot \left(-\frac{5}{6}\right)^{-5} \div \left(\frac{1}{5}\right)^6$

3) $\left(\frac{1}{4}\right)^{-7} \cdot \left(\frac{4}{3}\right)^{-6}$

4) $\left(-\frac{1}{2}\right)^2 + \left(\frac{3}{5}\right)^{-4} \cdot \left(\frac{6}{5}\right)^4$

$\left(\frac{9}{2}\right)^5 \div \left(\frac{2}{3}\right)^{-5}$

7) $\left(\frac{2}{9}\right)^3 \div \left(\frac{1}{3}\right)^5 \cdot \left(\frac{3}{2}\right)^{-2}$

$\left(\frac{5}{4}\right)^2 - \left(\frac{1}{4}\right)^3$

10) $\left(\frac{2}{7}\right)^6 \div \left(\frac{1}{7}\right)^7$

11) $\left(\frac{3}{4}\right)^3 + \left(-\frac{1}{2}\right)^4$

12) $\left(\frac{8}{5}\right)^{-2} \cdot \left(-\frac{8}{3}\right)^2 - \left(\frac{1}{3}\right)^3$

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Evaluating Exponents

Evaluate each expression.

1) $\left(\frac{2}{5}\right)^3 - \left(\frac{3}{5}\right)^2$

$-\frac{37}{125}$

2) $\left(-\frac{1}{6}\right)^4 \cdot \left(-\frac{5}{6}\right)^{-5} \div \left(\frac{1}{5}\right)^6$

-30

3) $\left(\frac{1}{4}\right)^{-7} \cdot \left(\frac{4}{3}\right)^{-6}$

2,916

4) $\left(-\frac{1}{2}\right)^2 + \left(\frac{3}{5}\right)^{-4} \cdot \left(\frac{6}{5}\right)^4$

$\frac{65}{4}$ or $16\frac{1}{4}$

$\left(\frac{9}{2}\right)^5 \div \left(\frac{2}{3}\right)^{-5}$

243

7) $\left(\frac{2}{9}\right)^3 \div \left(\frac{1}{3}\right)^5 \cdot \left(\frac{3}{2}\right)^{-2}$

$\frac{32}{27}$ or $1\frac{5}{27}$

$\left(\frac{5}{4}\right)^2 - \left(\frac{1}{4}\right)^3$

$\frac{99}{64}$ or $1\frac{35}{64}$

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10) $\left(\frac{2}{7}\right)^6 \div \left(\frac{1}{7}\right)^7$

448

11) $\left(\frac{3}{4}\right)^3 + \left(-\frac{1}{2}\right)^4$

$\frac{31}{64}$

12) $\left(\frac{8}{5}\right)^{-2} \cdot \left(-\frac{8}{3}\right)^2 - \left(\frac{1}{3}\right)^3$

$\frac{74}{27}$ or $2\frac{20}{27}$