C12 - 7.1 - Exponents Laws HW

Simplify

$4^2 \times 4^3 =$ $3^2 \times 3^3 =$ $\frac{5^3}{5^2} =$ $\frac{7^3}{7^5} =$

$\frac{3^2}{81} =$ $(3^2)^4 =$ $(3x)^2 =$ $(x+2)^2 =$

$\left(\frac{1}{3}\right)^2 =$ $\left(\frac{2}{5}\right)^2 =$ $5^0 =$ $6^0 =$

Change Base

$25 =$ $9 =$ $8 =$ $27 =$

Change to base 2

$16 =$ $4^2 =$ $16^2 =$ $27^2 =$

Change to base 4

$16 =$ $16^2 =$ 64 256=

Write as a single of power

$3^2 \times 4^2 =$ $2^2 \times 5^2 =$

Write as a multiplication of powers

$(2 \times 3)^x =$ $(6)^x =$

Write with a positive exponents

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

Write with a negative exponents

$\frac{1}{5^2} =$ $\frac{1}{5} =$ $2^3 =$ $\frac{x}{3^2} =$

Change Base with negative exponent

$\frac{1}{25} =$ $\frac{1}{9} =$ $\frac{1}{16} =$ $\frac{1}{16} =$

C12 - 7.1 - Simplifying/Separating Exponents HW

Simplify to a single exponent

$2^x \times 2 =$

$3^x \times 3 =$

$(6^2)^x =$

$(9^x)^2 =$

$\frac{2^x}{2} =$

$\frac{7^x}{7} =$

$\frac{5}{5^x} =$

$\frac{4}{4^x} =$

$5^{2x} \times 5 =$

$3^{2x} \times 3^x =$

$3^x \times 9 =$

$2^x \times 16 =$

$\frac{4^x}{8} =$

$\frac{4^x}{256} =$

$\frac{49}{7^x} =$

$\frac{81}{3^x} =$

C12 - 7.1 - Simplifying/Separating Exponents HW

Separate into a multiplication/division/or use brackets with the same base. ($Isolate\ \#^{x}$)

$3^{x+1} =$ $5^{x-1} =$ $2^{1-x} =$ $6^{2x+1} =$

$7^{2x} =$ $2^{2x+1} =$ $5^{x-1} =$ $6^{2x} =$

$3^{1-x} =$ $2^{2x+3} =$ $5^{x-3} =$ $7^{x+1} =$

$3^{2-2x} =$ $6^{3x} =$ $7^{3x+2} =$ $1^{2x} =$

Separate into a multiplication/division/or use brackets with the different bases. ($Isolate\ \#^{x}$)

$6^{x} =$ $10^{x} =$ $14^{x} =$ $15^{x} =$

$8^{x} =$ $8^{x} =$ $12^{x} =$ $12^{x} =$

C12 - 7.1 - Simplifying/Separating Exponents HW

Simplify

$\frac{2^3 \times 2^5}{2^2} =$

$\frac{4^8 \times 2^5}{32} =$

$\frac{8^3 \times 2^{10}}{256 \times 4^2} =$

$\frac{2^8 \times 2^{-3}}{16} =$

$\frac{8^{-1} \times 32^4}{64^{-2}} =$

$\frac{2^{-1} \times 16^{-4}}{128^{-2}} =$

$\frac{2^{2x+1} \times 2^2}{2^x} =$

$\frac{4^x \times 8}{2} =$

$\frac{3^{3x+2}}{3^{x+1}} =$

$\frac{5^{4x-1}}{125^x} =$

$\frac{4^x \times 8^{3x+1}}{16^{2x+3}} =$