Laws of Exponents

1) $\dfrac{x^9}{x^5} =$ _____

2) $x^1 =$ _____

3) $\left(x^3\right)^5 =$ _____

4) $\dfrac{x^2}{x^7} =$ _____

5) $x^5 \cdot x^2 =$ _____

6) $x^0 =$ _____

7) $x^{-1} =$ _____

8) $-3^{-2} =$ _____

1) When multiplying, _____ the powers.

2) When dividing, _____ the powers.

3) When the power is outside the parentheses, _____ the powers.

4) A negative power means _____.

Simplify.

1) $4 \cdot 5^{-2}$

2) $(-5)^{-4} \cdot (-5)^4$

3) $[(-5)^{-4}]^4$

4) $\dfrac{1}{4^{-2}}$

5) $\dfrac{x^2}{x^{-3}}$

6) $\left(\dfrac{1}{8}\right)^{-1}$

7) $\left(-\dfrac{5}{3}\right)^{-3}$

8) $\dfrac{3x^{-2}}{y^{-1}}$

9) $\left(\dfrac{x^2}{y^{-1}}\right)^{-2}\left(\dfrac{y^2}{x^{-1}}\right)^2$

Assignment:
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  3-43 odd,
  44, 45,
  50-53 all,
  55, 56a, 57a