

Complete the following problems below **showing all your work**.

1. Simplify each expression and write your answer in exponential notation.

a. $\frac{1m^{12}}{5m^{-5}} =$

b. $4^5 \cdot 7^5 =$

c. $(2m^5)^2 =$

2. Solve each equation for x and identify each equation: consistent, inconsistent or identity.

a. $7 - 5(x - 6) + 4 = 3 - 2(x - 5) - 3x + 28$ Answer: _____

Equation Type: _____

Number of Solutions: _____

b. $2 - 3(x - 4) = 4(x - 7) - 7x$

Answer: _____

Equation Type: _____

Number of Solutions: _____

c. $\frac{1}{3}(9x + 21) + 2x = 10x - 7 - 5x$

Answer: _____

Equation Type: _____

Number of Solutions: _____

- d. Create your own type of equation. You may choose consistent, inconsistent or identity. It must be solved.