

A1.1 Algebra Homework

1. (1 pts)

Match the definition to the correct rule of exponents.

A. \_\_\_\_\_ repeated multiplication

B. \_\_\_\_\_ add the exponents

A. \_\_\_\_\_ subtract the exponents

B. \_\_\_\_\_ multiply the exponents

2. (1 pts)

Simplify each multiplication problem.

$$x^3 x^6 = \underline{\hspace{2cm}}$$

$$4y^3 \cdot 2y^2 = \underline{\hspace{2cm}}$$

$$-4y^3 \cdot 2y^2 = \underline{\hspace{2cm}}$$

$$-4y^3 \cdot -2y^2 = \underline{\hspace{2cm}}$$

3. (1 pts)

Simplify and write the answer with positive exponents only.

$$\frac{5x^{12}}{x^3} = \underline{\hspace{2cm}}$$

$$\frac{12y^{10}}{3y^3} = \underline{\hspace{2cm}}$$

$$\frac{8z^3}{z^3} = \underline{\hspace{2cm}}$$

4. (1 pts)

Simplify each problem.

$$(x^3)^6 = \underline{\hspace{2cm}}$$

$$(2y^4)^4 = \underline{\hspace{2cm}}$$

5. (1 pts)

Simplify completely. Write the answer with positive exponents.

$$(4x^5y^4)(5x^5y^2) = \underline{\hspace{2cm}}$$

6. (1 pts)

Simplify completely. Write the answer with positive exponents.

$$(-2x^2y^6)(3x^5y^3) = \underline{\hspace{2cm}}$$

7. (1 pts)

Simplify and write the answer with positive exponents only.

$$\frac{(10x^3)(4x^5)}{5x^3} = \underline{\hspace{2cm}}$$

8. (1 pts)

Simplify and write the answer with positive exponents only.

$$\frac{(3x^3)^3}{3x^2} = \underline{\hspace{2cm}}$$

9. (1 pts)

Simplify and write the answer with positive exponents only.

$$\frac{(15x^6y^2)(6x^5y^4)}{5x^2y^2} = \underline{\hspace{2cm}}$$

10. (1 pts)

Simplify and write the answer with positive exponents only.

$$\frac{(3x^5y^3)^2}{3x^3y^2} = \underline{\hspace{2cm}}$$

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