

# Review [6-1] A-E

Name: \_\_\_\_\_

Exponents; Adding and Subtracting Polynomials; Multiplying Polynomials; Powers of Monomials

Write each expression in exponential form.

- $x \cdot x \cdot x \cdot x$
- $c \cdot e \cdot 2 \cdot c \cdot e$
- $-2 \cdot x \cdot x \cdot 3 \cdot x$
- $c \cdot c \cdot d \cdot d \cdot d \cdot c$

- Evaluate  $x^3$  if  $x = -3$ .
- Evaluate  $x^2$  if  $x = -5$ .

## Set 2 (other paper)

Evaluate each expression if  $x = 2$  and  $y = -1$ .

- a.  $2x + y^2$       29. a.  $2 + xy^2$   
b.  $(2x + y)^2$       b.  $(2 + xy)^2$
- a.  $2x - y^2$       33. a.  $2 - xy^2$   
b.  $(2x - y)^2$       b.  $(2 - xy)^2$

## Set 9

Simplify. Give your answers using positive exponents.

- $(m^{-2})^3$
- $(x^{-3})^2$
- $(2x^{-2})^2$
- $\frac{u^{-3}}{u^7}$
- $\frac{c^{-5}}{c^3}$
- $\frac{d^3}{d^{-3}}$

## Set 3

Simplify.

- $2x - y + 3x - 2y$
- $4x^2 - 3x - 2x^2 + 7x - 2$
- $a^2 + 2ab - 5ab + 4a^2$
- $a^2b - 2ab^2 + 5a^3 - 3a^2b$

## Set 4

Simplify.

- $x^3 \cdot x^6$
- $x^2 \cdot x^3 \cdot x$
- $a^2 \cdot a^3 \cdot a^5$
- $m^2 \cdot m^6 \cdot m^8$

## Set 5

Simplify.

- $(2a^4)(5a^3)$
- $(7m^5)(2m^6)$
- $(-2xy^2)(-3x^2y)$
- $(3ab)(a^2b)(5b^2)$
- $(3cd^4)(-2c^2)(4cd^2)$
- $(-x^2y^2)(3x^2y)(-4xy^3)$

## Set 6

Simplify.

- $(\frac{3}{4}r^2)(\frac{4}{3}r^2)$
- $(8a)(\frac{3}{4}a^2)$
- $(\frac{3a^2}{7})(35a^5)$
- $(-\frac{5}{6}x^3)(3xy^2)(-y^2)$

## Set 7 Show work. (Two steps required)

Simplify.

- $(2x)(3x^3) + (5x^2)(4x^2)$
- $(6x^2)(2x^3) + (3x)(5x^4)$
- $(3a^4)(-2a^3) + (2a^2)(a^5)$

## Set 8

Simplify.

- $(-2x^4)^2$  \_\_\_\_\_
- $(-3x)^3$  \_\_\_\_\_
- $(3a)(3a)^3$  \_\_\_\_\_
- $(2xy^2)^3 \cdot 4xy$  \_\_\_\_\_
- $(3x^2y^2)^2(xy)^3$  \_\_\_\_\_
- $-(2x^4)^2$  \_\_\_\_\_
- $(-3x^2)^4$  \_\_\_\_\_
- $(4x)^2(4x)$  \_\_\_\_\_
- $(-3cd)^4(\frac{1}{9}d)^3$  \_\_\_\_\_
- $(-3x)^3$  \_\_\_\_\_
- $-(3x^2)^5$  \_\_\_\_\_
- $(2n)^3(\frac{3}{2}n)^3$  \_\_\_\_\_

Don't forget Set 9