

Practice Assignment

1. Complete the table.

Expression	List the Terms	List the Factors	List the Variables	List the Coefficients	List the Constants
$3y^3 + 4y^2 - 7y + 1$	$3y^3, 4y^2, -7y, 1$	~~~~~	y	3, 4, -7	1
$5x^4 - 9x^2$	$5x^4, -9x^2$	~~~~~	x	5, -9	—
$-a^2 + 6a - 3$	$-a^2, 6a, -3$	~~~~~	a	-1, 6	-3
15	15	~~~~~	—	—	15

2. Write an expression with exactly 5 terms, containing the coefficients 7, 21, -15, and 8. (Answers will vary.)

$$7x + 21x^2 - 15x^3 + 8x^4 + 1$$

3. Simplify each expression (hint: combine "like terms").

a. $5f + 8 - 13f$

$$-8f + 8$$

b. $2x - 5x^2 + 3 + 4x$

$$6x - 5x^2 + 3$$

c. $3x^2 + 6x - 2y + 4x^2 + 3y - x$

$$7x^2 + 5x + y$$

d. $3(2x - 4) + 2x$

$$6x - 12 + 2x$$

$$8x - 12$$

e. $-2(8y - 4) + 9y + 6$

$$-16y + 8 + 9y + 6$$

$$-7y + 14$$

f. $\frac{13 + 2(7x - 3)}{7}$

$$\frac{13 + 14x - 6}{7}$$

$$\frac{13}{7} + 2x - \frac{6}{7}$$

$$\frac{7}{7} + 2x$$

$$1 + 2x$$

g. $-(12 - 4x) + 8(10 - x)$

$$-12 + 4x + 80 - 8x$$

$$\boxed{68 - 4x}$$

h. $7(2x - 4) - (10 - 3x)$

$$14x - 28 - 10 + 3x$$

$$\boxed{17x - 38}$$

i. $\frac{6x+9}{3} - 5 + 4(-x-3)$

$$\frac{6x}{3} + \frac{9}{3} - 5 + 4 \cdot -x - 4 \cdot 3$$

$$2x + 3 - 5 - 4x + 12$$

$$\boxed{-2x + 10}$$

4. Give an example of two like terms and two unlike terms. Explain why they would or would not be classified as like terms.

Like

$7x, -3x$

Unlike

$4m, 5m^2$
unlike exponents

5. Stretch your thinking - Simplify the following expression: $5(x-4) - (2x-7) + x - 2(x+3)$

$$5x - 20 - 2x + 7 + x - 2x - 6$$

$$\boxed{2x - 19}$$