

Equation Vocabulary

Name key Date _____

<p>In $3x + 7 = 32$, 7 is a/an <u>constant</u> (and term)</p>	<p>In $3x + 7 = 32$, 3 is a/an <u>coefficient</u></p>
<p>In $3x + 7 = 32$, x is a/an <u>variable</u></p>	<p>In $3x + 7 = 32$, 32 is a/an <u>constant</u> (and term)</p>
<p>In $3x + 7 = 32$, 3x is a/an <u>term</u></p>	<p>In $3x + 7 = 32$, 3x + 7 is a/an <u>expression</u></p>
<p>In $12ab - 6z = 99a + 4$, list all of the coefficients.</p> <p>12 -6 99</p>	<p>In $12ab - 6z = 99a + 4$, list all of the terms.</p> <p>12ab -6z 99a 4</p>
<p>In $12ab - 6z = 99a + 4$, list all of the expressions.</p> <p>12ab - 6z 99a + 4</p>	<p>In $12ab - 6z = 99a + 4$, list all of the variables.</p> <p>a b z</p>

How many terms are in each of the following algebraic expressions?

****Highlight each individual term.**

- a) $6x^3 + 8x^2 - 4x$
- b) $15xy^3 + 21x^2 - 16$
- c) $19x^4 + 8x^2 + 4xy - 2$
- d) $8x^3 + 14x^5 - 20x^2 + 9x - 25$
- e) $9x^3y + 5x^4 - 24x^2 + 7x - 6x^6$
- f) $2ab + 7$
- g) $15xy + 7x + 2y + 9$

ANSWERS

- A 3
- B 3
- C 4
- D 5
- E 5
- F 2
- G 4

Identify the coefficients in each expression.

****Highlight each coefficient.**

- a) $81x^3 + 7xy^2 - 14x$
- b) $4x^3 + 8x^2 - 24$
- c) $61x^2 + 6x^2 + 2x - 7$
- d) $4xyz^3 + 8x^2 - 2xy^2 + 29x - 46$
- e) $22a^3 + 38a^2 - 12b$
- f) $28a^2 - 17ab$
- g) $7x + 2xy$

ANSWERS

- A 81, 7, -14
- B 4, 8, -
- C 61, 6, 2
- D 4, 8, -2, 29
- E 22, 38, -12
- F 28, -17
- G 7, 2

Identify the factors of each expression. Separate factors with commas in the answers column.

- a) $12x^3y^2$
- b) $62x^4$
- c) $2x^2y$
- d) $125x^5$
- e) $9a^7$
- f) -12
- g) $-12ab^2c$

ANSWERS

A
B
C
D
E
F
G
SKIP

Identify the Exponents in each expression.

- a) $12x^3y^2$
- b) $62x^4$
- c) $2x^2y^1$
- d) $125x^5$
- e) $9a^7$
- f) -12
- g) $-12ab^2c^1$

****Highlight each exponent.**

ANSWERS

- A 3, 2
- B 4
- C 2, 1
- D 5
- E 7
- F —
- G 2, 1

List the like terms in each of the following algebraic expressions.

- a) ~~100x~~ + 25x - 6x + 2
- b) $8x^2 + 12x^2 - 9xy + 3x$
- c) $86x^3 + 42x - 36x^3 + 21y$
- d) $4x^2 + 6y - 6x + 7y$
- e) $36m^3 + 22m^2n^2 - 2m^2n^2 + 7m - 50$

****Highlight like terms with the same color highlighter.**

ANSWERS

- A ~~100x~~, 25x, -6x, 2
- B $8x^2, 12x^2, -9xy, 3x$
- C $86x^3, 42x, -36x^3, 21y$
- D ~~4x^2~~, 6y, ~~6x~~, 7y
- E ~~36m^3~~, $22m^2n^2, -2m^2n^2$, ~~7m~~, -50

Identify the constant and variables in each algebraic expression.

- a) $81x^3 + 7xy^2 - 14x$
- b) $4x^3 + 8x^2 - 24$
- c) $61x^2 + 6x^2 + 2x - 7$
- d) $4xyz^3 + 8x^2 - 2xy^2 + 29x - 46$
- e) $22a^3 + 38a^2 - 12b$
- f) $28a^2 - 17ab$
- g) $7x + 2xy$

Constant

Variables

- | | | |
|---|------|---------|
| A | none | x, y |
| B | -24 | x |
| C | -7 | x |
| D | -46 | x, y, z |
| E | none | a, b |
| F | none | a, b |
| G | none | x, y |

Write an expression with 5 terms, containing the coefficients 7, 21, 14, and 8.

$$7x^2 - 21x^4 + 14x - 8y + 3$$

Name key

Class period: _____

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Identifying Terms, Coefficients, and Constants

For each expression, fill in the table by telling how many terms there are and by listing the coefficients and the constants.

	Problem #	# of Terms	Coefficients	Constants
1.) $x + 1$	1	2	1	1
2.) $2x^2 + x - 3$	2	3	2, 1	-3
3.) 4	3	1	none	4
4.) $10x^3yz$	4	1	10	none
5.) $3x - 6$	5	2	3	-6
6.) $7y^3 - 4y^2 + 2$	6	3	7, -4	2
7.) -10	7	1	none	-10
8.) $a + 2b + 4c + d$	8	4	1, 2, 4, 1	none
9.) $r^2 + 11r$	9	2	1, 11	none
10.) 0	10	1	none	0
11.) $3x^2y^4$	11	1	3	none
12.) $4x^3 - 4x^2 + x + 3$	12	4	4, -4, 1	3
13.) $2x^3 - 1$	13	2	2	-1
14.) $6y$	14	1	6	none
15.) $-4x^4$	15	1	-4	none
16.) $5x^4y^3$	16	1	5	none
17.) $x^2 + x - 3$	17	3	1, 1 1, 1	-3
18.) $-3x$	18	1	-3	none
19.) $4x^2 - 1$	19	2	4	-1
20.) $7x^6 - 3x^3 + 2$	20	3	7, -3	2