

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

- 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

B

C

D

E

F

G

Identify the coefficients in each 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) $7x + 2xy$

ANSWERS

A

B

C

D

E

F

G

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

Identify the Exponents in each expression.

- 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

ANSWERS

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

- a) $14xy^2 + 25x - 6x + 2$
- b) $8x^2 + 12x^2 - 9xy + 3x$
- c) $86x^3 + 42x - 36x^3 + 21y$
- d) $4x^2 + 6y - 6x + 7y$
- e) $36m^3 + 22m^2n^2 - 2m^2n^2$
+ $7m - 50$

A

B

C

D

E

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

B

C

D

E

F

G

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

Key

Identifying Parts of Algebraic Expressions WS

Coordinate Algebra

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

- 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.

- a) $81x^3 + 7xy^2 - 14x$
 b) $4x^3 + 8x^2 - 24x^0$
 c) $61x^2 + 6x^2 + 2x - 7x^0$
 d) $4xyz^3 + 8x^2 - 2xy^2 + 29x - 46x^0$
 e) $22a^3 + 38a^2 - 12b$
 f) $28a^2 - 17ab$
 g) $7x + 2xy$

ANSWERS

- A 3
 B 8 2
 C 9 3
 D 4 4
 E 3
 F 2
 G 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 $12 \cdot x^3 \cdot y^2$
 B $62 \cdot x^4$
 C $2 \cdot x^2 \cdot y$
 D $125 \cdot x^5$
 E $9 \cdot a^7$
 F $-12 \cdot x^0$
 G $-12 \cdot a \cdot b^2 \cdot c$

Identify the Exponents in each expression.

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

ANSWERS

- | | |
|---|-------|
| A | 3, 2 |
| B | 4 |
| C | 2, 1 |
| D | 5 |
| E | 7 |
| F | 0 |
| G | 1 2 1 |

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

- a) $14xy^2 + 25x - 6x + 2$
- b) $8x^2 + 12x^2 - 9xy + 3x$
- c) $86x^3 + 42x - 36x^3 + 21y$
- d) $4x^2 + 6y - 6x + 7y$
- e) $36m^3 + 22m^2n^2 - 2m^2n^2 + 7m - 50$

ANSWERS

- | | |
|---|----------------------|
| A | $25x, -6x$ |
| B | $8x^2, 12x^2$ |
| C | $86x^3, -36x^3$ |
| D | $6y, 7y$ |
| E | $22m^2n^2, -2m^2n^2$ |

Identify the constant and variables in each algebraic expression.

OR just

- a) $81x^3 + 7xy^2 - 14x$ i.e. x, y
- 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) $7x + 2xy$

	<u>Constant</u>	<u>Variables</u>
A	x^3, xy^2, x	
B	-24	x^3, x^2, x^0
C	-7	x^2, x, x^0
D	-46	xyz^3, x^2, xy^2, x, y
E	a^3, a^2, b	
F	a^2, ab	
G	x, xy	

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

$$7x^3 + 21xy + 14y + 8x + 9$$