

Polynomials and Terms

AB-WAP 1

Instructions: How many terms does each polynomial have? Write your answer in the blank provided.

- 1 3 $4x^3 + 4x^2 + x$
- 2 _____ $a^3 - 5a^2 + a + 7$
- 3 _____ $7x^6 - 10x^3 + 9x^2 + 5x - 8$
- 4 _____ $x^8 + x^7 + x^6 + x^5 + x^4 + x^3 + x^2 + x$
- 5 _____ $x^8 + x^7 + x^6 + x^5 + x^4 + x^3 + x^2 + x + 1$
- 6 _____ $12b^2$
- 7 _____ $xy - 5 + 9x^5 + 3x - 6x^2y - 25x^4$
- 8 _____ $7x^2 - 10 + 5x - 8x^3 - x^4$
- 9 _____ $5a^3 - b^2 + 5c - 8a + 12 + b + c$
- 10 _____ $x - 1$

Instructions: Based on the number of terms, classify each of the following as a monomial, binomial, trinomial or polynomial.

- 1 binomial $2x - 5y$
- 2 _____ $6x^2 - x + 4$
- 3 _____ $7x^6$
- 4 _____ $4x^4 + 3x^3 + 2x^2 + x$
- 5 _____ $a^2 + b^2$

Terms: Degree and Coefficient

AB-WAP 2

Instructions: For each polynomial below, circle the term of the specified degree and then write the coefficient of that term in the space provided.

1 3rd degree $5x^4 - 8x^3 + x^2 + 10x - 15$ Coefficient -8

2 2nd degree $a^3 + a^2 + 3$ Coefficient _____

3 4th degree $21x^8 + 16x^6 + 11x^4 + 6x^2 + 1$ Coefficient _____

4 1st degree $-6x^4 + 4x^3 + 2x^2 - x + 1$ Coefficient _____

5 6th degree $-x^4 + 7x^6 + 14x^3 - 9x + 10$ Coefficient _____

6 5th degree $-a + 7a^2 + 14 - 5a^5 + 10a^2$ Coefficient _____

7 2nd degree $b^4 + 2b^3 + 3b^2 + 4b + 5$ Coefficient _____

8 1st degree $-3x^7 + 9x^5 - 4x^3 - 6x + 1$ Coefficient _____

9 4th degree $-x^2y^2 + xy^2 + yx - x + y - 2$ Coefficient _____

10 3rd degree $5xy^4 - 5xy^3 + 5xy^2 - 5xy$ Coefficient _____

11 3rd degree $a^3b^3c^3 + a^2b^2c^2 + abc$ Coefficient _____

12 2nd degree $10xy + 4x^2y + 6xy^2 + 3x^2y^2$ Coefficient _____

Re-arranging Polynomials

AB-WAP 3

Instructions: Re-arrange each polynomial so that its terms are in order from highest degree to lowest degree. (Be sure to move the negative sign along with any negative terms that you move.)

1 $5x - 9 - x^3 + 10x^2$

$-x^3 + 10x^2 + 5x - 9$

2 $-x + 20 + 3x^2$

3 $12a^2 - 8a^4 - 4a^6$

4 $-7 + 4x + 2x^5 + x^3$

5 $4x - 8x^2 + 16$

6 $-a + a^2 - a^3 - a^5 + a^4$

7 $10 + 2b^3 + 3b$

8 $-3x^5 + 15 - 9x^3 - 4x$

9 $-5xy + xy^2 + x^2y^2 + 2y$

10 $ab - abc + a^2bc - a$