A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a monomial or the sum of monomials, each called a term of the polynomial. Some polynomials have special names:

|  |  |
| --- | --- |
| Degree | Name |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |
| 6 or more | 6th degree, 7th degree, etc.  |

* A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the sum of two monomials.
* A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the sum of three monomials.

The degree of a monomial is the \_\_\_\_\_\_ of the exponents of all its variables. A nonzero constant term has degree 0, and zero has no degree.

The \_\_\_\_\_\_\_ of a polynomial is the **highest degree** of any of the terms in the polynomial.

*Example*  has a degree of \_\_\_\_\_\_\_\_ and is called \_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_.

When the terms of a polynomial are arranged so that the terms are in order from least to greatest degree, the polynomial is in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ form.

**Determine whether the following expression is a polynomial. If so, identify the polynomial as a monomial, binomial, or trinomial. Then find the degree of the polynomial.**

|  |  |  |  |
| --- | --- | --- | --- |
| Expression | Polynomial? | Monomial, Binomial, or Trinomial? | Degree of the Polynomial? |
| 3x – 7xyz |  |  |  |
| -25 |  |  |  |
|   |  |  |  |
|  |  |  |  |

**Determine whether each expression is a polynomial. If it is a polynomial, find the degree and determine whether it is a monomial, binomial, or trinomial.**

1.  2. 
2.  4. 
3.  6. 

**Write each polynomial in standard form. Identify the leading coefficient.**

1.  8. 
2.  10. 

**Find each sum or difference.**

1.  12. 
2.  14. 
3.  16. 
4.  18. 
5. The total number of students *T* who traveled for spring break consists of two groups: students who flew to their destinations *F* and students who drove to their destination *D.* The number (in thousands) of students who flew and the total number of students who flew or dove can be modeled by the following equations, where *n* is the number of years since 1995.

 

1. Write the equation that models the number of students who drove their destination for this time period.
2. Predict the number of students who will drive to their destination in 2012.
3. How many students will drive or fly to their destination in 2015?