

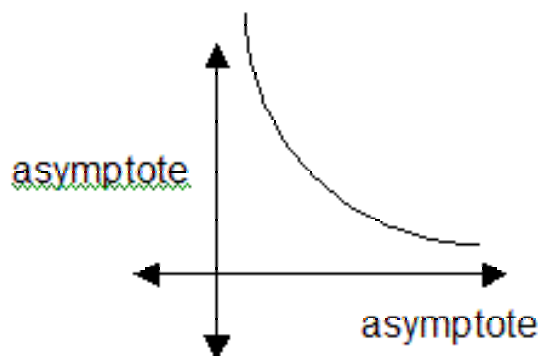


**Mid-Ohio Educational Service Center
Mathematics Course of Study
Twelfth Grade – Vocabulary Definitions**

(Ohio Department of Education. 2001. K-12 Mathematics Academic Content Standards)

associative property	The result of an operation on real numbers will be unchanged due to grouping; e.g., for addition, $(a + b) + c = a + (b + c)$ or for multiplication, $a(bc) = (ab)c$.
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asymptote	A straight line that a curve approaches but never touches. For example,
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bivariate data	Data or events described using two <i>variables</i> .
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coefficient	The numeric factor in a <i>term</i> ; e.g., the number 3 in the term $3x^2y$ is the coefficient or in the term a^3b , 1 is the coefficient.
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combination	A selection of a group of items or events from a set without regard to order; e.g., the number of 3-piece outfits from the set of clothes in the closet.
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commutative property	The order of the objects in an operation can be changed without affecting the results; e.g., for addition, $a + b = b + a$ or for multiplication, $ab = ba$.
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complementary events	Two or more <i>mutually exclusive events</i> that together cover all possible outcomes. The sum of the probabilities of complementary events is 1.
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conditional probability	The probability of an event occurring given that another event has already occurred. For example, What is the probability that the total of two dice will be greater than 8 given that the first die is a 6?
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dilation	A <i>transformation</i> that preserves the shape of a figure, but allows the size to change.
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distribution	The distribution of a set of data is a graph or table showing how many pieces of data there are in each class, or of each type.
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equation	A statement that shows two mathematical expressions that are equal to each other.
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experimental probability	<p>The probability based on a series of trials. The experimental probability, P, can be found using the following equation:</p> $P(\text{event}) = \frac{\text{\# of trials w/favorable outcomes}}{\text{number of trials in experiment}}$
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extrema	A term that refers to maximum and minimum values.
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function	A mathematical relationship between two <i>variables</i> , an independent <i>variable</i> and a dependent <i>variable</i> , where every value of the independent <i>variable</i> corresponds to exactly one value of the dependent value.
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identity property	<p>Of addition: Adding zero to a number gives a sum identical to the given number.</p> <p>Of multiplication: Multiplying a number by 1 gives a product identical to the given number.</p>
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mutually exclusive events	Two events that cannot occur at the same time.
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probability	The chance of an event occurring. The probability of an event is equal to the number of favorable outcomes divided by the number of possible outcomes.
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probability distribution	The set of random data and the probabilities associated with that data.
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random sampling	A random <i>sample</i> is a sample that has been chosen by a process of random selection so that it models the characteristics of the population it is supposed to represent as closely as possible.
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random variable	A <i>variable</i> that takes any of a range of values that cannot be predicted with certainty.
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rate of change	A relationship such as distance over time, often described by using a slope.
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reflection	A <i>transformation</i> that results in a mirror image of the original shape.
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rotation	A rotation is a <i>transformation</i> about a fixed point such that every point in the object turns through the same angle relative to that fixed point.
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sample	A set of data taken from a larger set used to create or test theories about the data as a whole.
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sampling method	The process used to collect data; e.g., see <i>random sampling</i> .
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sequence	An ordered set of objects or numbers.
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series	Sum of a finite or infinite sequence of terms.
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successive approximation	To find the approximate value of a quantity by starting from a first estimate and then deriving from each approximation another that is more accurate.
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symbolic form	To represent something using numbers and symbols.
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terms	The quantities in an algebraic equation that are linked to each other by means of + or - signs.
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theoretical probability	Identifying, using mathematical expectations, the number of ways an event could happen compared to all the events that could happen.
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transcendental function	<i>Functions</i> that are not algebraic; e.g., trigonometric functions.
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transformation An operation that creates an image from an original figure, or preimage.

reflection- *A transformation that results in a mirror image of the original shape.*

rotation- *A rotation is a transformation about a fixed point such that every point in the object turns through the same angle relative to that fixed point.*

translation- *A transformation in which an image is formed by moving every point on a figure the same distance in the same direction.*

dilation- *A transformation that preserves the shape of a figure, but allows the size to change.*

translation	<i>A transformation in which an image is formed by moving every point on a figure the same distance in the same direction.</i>
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univariate data	<i>Having one variable.</i>
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