

October 20, 2017
 9:00 am 66
 10:00 am 75

Oct 20-9:52 AM

5.1 #11) $R = \{(-6, -4), (-4, -4), (-2, -4)\}$

Domain: $\{-6, -4, -2\}$ Range: $\{-4\}$

yes, R is a function

Def: Function - A relation is a function if and only if each object in the domain is paired with exactly one object in the range.

$y = -4$
 $m = 0$

* Vertical Line Test: if a vertical line passes through a graph only once then the graph is a function.

Oct 20-10:06 AM

$x^2 + y^2 = 1$

fails the V.L. test!

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Domain: $\{-4\}$ Range: $\{-6, -4, 1\}$

$(-4, -6), (-4, -4), (-4, 1)$

not a function

$x = -4$
 $m = \text{undefined}$

fails the V.L. test.

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5.2 Polynomials

* Term - is a number, a variable or a product of a number and a variable, where variable is raised to some power.

5, y, 5y, $5y^3$

① Monomial - single term
 "one" $5, 5y, 5y^3$

② Binomial - terms (monomials)
 "two" Connected by addition
 $x+3, 2x-5$ or $ax+bx, x^2-2$ or x^2+6

③ Trinomial - three terms
 connected by addition.
 $x^2-x-12, 6+2y-3$

④ Polynomial - more than three terms
 "many" connected by addition.
 $-4x^2 + 2x^5 - 3x^3 + 2x^2 - x^2 + x + 10$

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