

# Math 1513 - College Algebra

Quiz #6 - 2008.10.07

## Solutions

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1. Decide whether each of the following relations defines a function.

a)  $f = \{(2, 2), (3, 2), (-1, 2), (-2, 2)\}$

This is a function.

b)  $g = \{(2, 1), (2, 2), (-1, 2), (-2, 2)\}$

This is not a function.

c)  $h = \{(blue, 2), (3, blue), (-1, green), (orange, 2)\}$

This is a function.

d)  $i = \{(blue, red), (red, blue), (yellow, green), (orange, yellow)\}$

This is a function.

e)  $j = \{(blue, red), (red, blue), (yellow, green), (red, yellow)\}$

This is not a function.

2. State the domain of each of the following functions.

a)  $f = \sqrt{x-1}$

Domain is  $[1, \infty)$ .

b)  $g = \frac{x+1}{\sqrt{x-1}}$

Domain is  $(1, \infty)$ .

c)  $h = x^2 + 3x - 1$

Domain is  $(-\infty, \infty)$ .

d)  $i = \{(blue, red), (red, blue), (yellow, green), (orange, yellow)\}$

Domain is  $\{blue, red, yellow, orange\}$ .

e)  $j = \frac{1}{4x^2+2}$

Domain is  $(-\infty, \infty)$ .