

HOMEWORK QUIZ - Twelve Basic Functions

Date: _____ Form A

Name Key

1. Determine whether the equation represents y as a function of x .

$$16x - y^4 = 0$$

$$y^4 = 16x$$

$$y = \sqrt[4]{16x}$$

yes, function

2. Given: $f(x) = x^2 + 1$

Evaluate the function for $f(x-2)$

$$f(x-2) = (x-2)^2 + 1$$

$$= x^2 - 4x + 4 + 1$$

$$= \underline{\underline{x^2 - 4x + 5}}$$

3. State the domain of the function.

$$f(x) = \sqrt{25 - x^2}$$

$$25 - x^2 \geq 0$$

$$-x^2 \geq -25$$

$$x \leq \pm 5$$

$$d: -5 \leq x \leq 5$$

Grade: _____

HOMEWORK QUIZ - Twelve Basic Functions

Date: _____ Form B

Name Key

1. Determine whether the equation represents y as a function of x .

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

yes, function

2. Given: $f(x) = x^2 - 3$

Evaluate the function for $f(x-2)$

$$f(x-2) = (x-2)^2 - 3$$

$$= x^2 - 4x + 4 - 3$$

$$= \underline{\underline{x^2 - 4x + 1}}$$

3. State the domain of the function.

$$f(x) = \frac{x}{x^2 - x - 6}$$

$$x^2 - x - 6 \neq 0$$

$$(x-3)(x+2) \neq 0$$

$$x-3 \neq 0 \quad x+2 \neq 0$$

$$x \neq 3 \quad x \neq -2$$

$$(-\infty, -2) \cup (-2, 3) \cup (3, \infty)$$

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