

Honors Pre-Calc

9-27-07

1. Find the formulas for the functions $f + g$, $f - g$, and $f \cdot g$. State the domain of each the composites and individual functions.

$$f(x) = \sqrt{x+5} \qquad g(x) = |x+3|$$

2. Find $f(g(x))$ and $g(f(x))$. State the domain of each.

$$f(x) = x^2 + 1 \qquad g(x) = \frac{1}{x-1}$$

3. Find two functions defined implicitly by each given relation.

$$x + y^2 = 25$$

4. Complete the following.

- Find the points determined by $t = -3, -2, -1, 0, 1, 2,$ and 3 .
- Find a direct relationship between y and x and determine whether the parametric equations determine y as a function of x .
- Graph the relationship.

$$x = t + 1 \quad \text{and} \quad y = t^2 - 2t$$

