

Quiz 15

- 1
- $f = x + 5$ $g = x^2 - 3$
- (a) $f + g = x^2 + x + 2$
- (b) $f - g = -x^2 + x + 8$
- (c) $f \cdot g = x^3 + 5x^2 - 3x - 15$
- (d) $f/g = \frac{x+5}{x^2-3}, x \neq \pm\sqrt{3}$
- (e) $f \circ g = f(g(x)) = f(x^2 - 3) = x^2 + 2$
- (f) $g \circ f = g(f(x)) = g(x + 5) = (x + 5)^2 - 3$
 $= x^2 + 10x + 22$

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$$h = (f \circ g) = \sqrt[3]{x^5 - 2},$$
$$f(x) = \sqrt[3]{x}$$
$$g(x) = x^5 - 2$$