

$$f(x) = 3x + 2, \quad g(x) = x^2 + 4$$

$$a) \quad f(3x+6) = 3 \cdot (3x+6) + 2 = 9x + 20$$

$$b) \quad f(g(x)) = f(x^2 + 4) = 3(x^2 + 4) + 2 = \\ = 3x^2 + 14$$

$$c) \quad g(x-2) = (x-2)^2 + 4 = x^2 - 4x + 8$$

$$d) \quad g(f(x)) = g(3x+2) = (3x+2)^2 + 4 = \\ = 9x^2 + 12x + 4 + 4 = \\ = 9x^2 + 12x + 8$$

Observera att

$$f(g(x)) \neq g(f(x))$$

i allmänhet.