

$$f(x) = \underline{x + 3}$$

$$g(x) = \underline{x^2 - 3x + 4}$$

$$[f \circ g](x) = f[g(x)] = f(\underline{x^2 - 3x + 4}) = (\underline{x^2 - 3x + 4}) + \underline{3}$$

$$[f \circ g](x) = x^2 - 3x + 7$$

$$[g \circ f](x) = g[f(x)] = g(\underline{x + 3}) = (x + 3)^2 - 3(x + 3) + 4$$

$$= (\underline{x + 3})(\underline{x + 3}) - \underline{3}(x + 3) + 4$$

$$= x^2 + \underline{6x} + \underline{9} - \underline{3x} - \underline{9} + \underline{4}$$

$$[g \circ f](x) = x^2 + 3x + 4$$

$$f(x) = 2x + 5 \quad g(x) = x + 1 \quad h(x) = x^2 + 4$$

$$[f \circ h](4) = f[h(4)] = f(20) = 2(20) + 5 = \boxed{45}$$

$$h(4) = 4^2 + 4 = 20$$

$$[h \circ g](-2) = h[g(-2)] = h(-1) = (-1)^2 + 4 = \boxed{5}$$

$$g(-2) = -2 + 1 = -1$$

$$[h \circ f](-6) = h[f(-6)] = h(-7) = (-7)^2 + 4 = \boxed{53}$$

$$f(-6) = 2(-6) + 5 = -7$$

p. 389-390			
15-16, 28-31, 33-42, 46-47, 56-57			