

I. Arithmetic of functions (p.147) —

$$1. \quad f(\mathbf{x}) + g(\mathbf{x}) = (f + g)(\mathbf{x})$$

$$2. \quad f(\mathbf{x}) - g(\mathbf{x}) = (f - g)(\mathbf{x})$$

$$3. \quad f(\mathbf{x}) \cdot g(\mathbf{x}) = (f \cdot g)(\mathbf{x})$$

$$4. \quad f(\mathbf{x}) \div g(\mathbf{x}) = (f \div g)(\mathbf{x})$$

II. Examples (pp.153-154): Exercises #4,22,28

III. Composition of functions (p.149):

$$f[g(\mathbf{x})] = (f \circ g)(\mathbf{x}) \quad f \text{ composed with } g$$

i.e., “ $g(\mathbf{x})$ ” is “input” into $f(\mathbf{x})$ in place of “ \mathbf{x} ”

IV. Examples (p.154): Exercises #40,52,56,58,62,100

HW: pp.153-155 / Exercises #1-11(odd),21-27(odd),
35-83(every other odd),85,87,99,103