Exercise 1 *The function $L(x) = x$, with its implied domain, is an increasing function.*

Multiple Choice:

(a) *True* ✓

(b) *False*

Exercise 2 *The function $S(x) = L(x) \cdot L(x)$, with its implied domain, is an increasing function.*

Multiple Choice:

(a) *True*

(b) *False* ✓

Exercise 3 *Suppose $A(x)$ and $B(x)$ are functions with equal domains.*
Suppose $A(x)$ and $B(x)$ are both increasing functions.
Then the product $A(x) \cdot B(x)$ is always an increasing function.

Multiple Choice:

(a) *True*

(b) *False* ✓

Exercise 4 *Suppose $A(x)$ and $B(x)$ are functions with equal domains.*
Suppose $A(x)$ and $B(x)$ are both increasing functions.
Then the sum $A(x) + B(x)$ is always an increasing function.

Multiple Choice:

(a) *True* ✓

(b) *False*

Exercise 5 *Suppose $A(x)$ and $B(x)$ are functions with equal domains. Suppose $A(x)$ and $B(x)$ are both increasing functions. Then the difference $A(x) - B(x)$ is always an increasing function.*

Multiple Choice:

(a) *True*

(b) *False*✓