

## Section 1.2

S1  $-2$

S3  $-2$

S5  $-1$

S7  $-3x^2 - 4ax - a^2$

S9  $x + y$

1 (a)  $80/3$  CDs per year

(b)  $-20$  CDs per year

(c)  $0$  CDs per year

3 Decreasing

5  $0.513$

7  $0.513$

9 (a) Negative

(b) Positive

11  $F(-2) > F(2)$

13 (a)  $A = (10, 30)$

$B = (30, 40)$

$C = (50, 90)$

$D = (60, 40)$

$E = (90, 40)$

(b) Point  $F$  is on the graph.

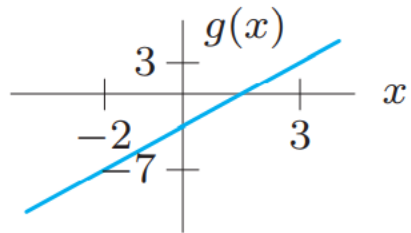
(c) Increasing:  $6-21,$

$36-51, 66-81$

(d) Decreasing:  $22-35,$

$52-65, 82-96$

- 15 (a) 2  
(b) Increasing  
(c) Increasing everywhere



- 17 (a) Town B  
(b) Town A
- 19 24.5 degrees/minute
- 21 (a) 162 calories  
(b) Swimmer  
(c) Increases
- 23 (a) 9  
(b)  $\frac{n - k}{m - j}$   
(c)  $6x + 3h$
- 25 (a) 10, 10, 10, 10, 7, 1  
(b) 30, 30.5, 53.6, 33.9, 15.5, -5  
(c) No;  $\Delta G / \Delta t$  not constant  
(d) Recycling and composting program in US