## 1.4 ws2 key

1. 
$$f(2) = -1$$
,  $f(4) = 3$ , yes,  $b/c - 1 < 0 < 3$   
 $0 = x^2 - 4x + 3$ ,  $(x-3)(x-1)$ ,  $c = 3$ 

- 2. f(1) = 2, f(3) = 34, no, because 0 is not in between 2 and 34.
- 3. f(0) = -1, f(5) = 29, yes, b/c 1 < 26 < 29 $26 = x^2 + x - 1$ ,  $0 = x^2 + x - 27$ , c = 4.720
- 4. f(1)=3, f(6)=8, no, because -2 is not in between 3 and 8.
- 5. f(0) = -2, f(3) = 19, no, because 22 is not in between -2 and 19.

6. 
$$f(2.5) = 5.833$$
,  $f(4) = 6.667$ , yes, b/c  $5.833 < 6 < 6.667$   
 $6 = \frac{x^2 + x}{x - 1}$ , cross multiply,  $6x - 6 = x^2 + x$ , set equal to zero,  $0 = x^2 - 5x + 6$   
 $(x - 3)(x - 2)$ ,  $c = 3$ 

7. V(0) = 0, V(5) = 523.333, yes, b/c 0 < 275 < 523.333