

## Sections 2.3 – 2.6

1. Consider the functions  $f$ ,  $g$  and  $h$  in the table below.

$x$	$f(x)$	$g(x)$	$h(x)$
0	10	10	10
1	9	7	5
2	6	4	2
3	1	1	1

- a. Are these functions **increasing** or **decreasing**?
- b. Which function is linear? \_\_\_\_\_
- c. Which function is concave down? \_\_\_\_\_
2. Let  $p(x)=x^2 - x - 10$ . Use the quadratic formula to find the zeros of  $p(x)$ . You must show your work. Your answers must be written in exact form.
3. The cost  $C$  (in dollars) to produce  $g$  gallons of chocolate chunk ice cream can be expressed as  $C=f(g)$ .
- a. Is  $f(g)$  more likely to be an increasing function or a decreasing function?
- b. Explain the meaning of  $f(540)=200$  in terms of ice cream production. Be sure to include units!
- c. Explain the meaning of  $f^{-1}(330)=870$  in terms of ice cream production. Be sure to include units!

