1.1 Change in Tandem

AP Precalculus

Name: _____

CA #2

For each function, identify what the dependent and independent variables represent.

1. $b(c)$ is a function where b is the number of billboards on the street and c is the number of cars registered in the city.

Dep:

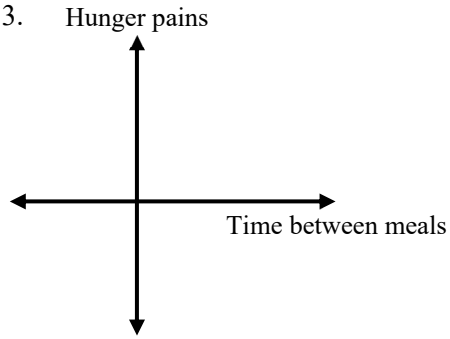
Indep:

2. $t(g)$ is a function where g is the number of girls in the scout troop and t is the number of Thin Mints sold.

Dep:

Indep:

3.



Dep:

Indep:

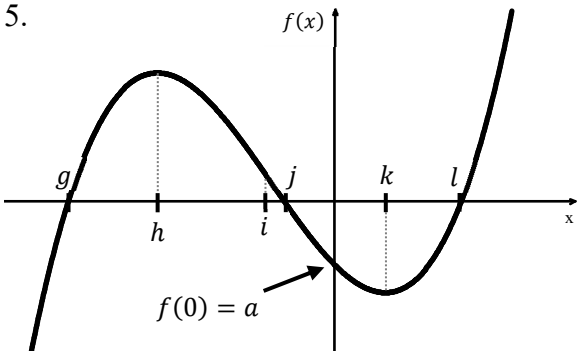
4. Let the function f be increasing or decreasing, but not both. State whether the function is increasing or decreasing on the given interval and justify your answer.

x	3	4	5	6	7
$f(x)$	6	8	10	11	11.5

More on the back.

Use the graph of f to answer the question below.

5.



a. On what interval(s) is the graph concave up?

b. On what interval(s) is the graph concave down?

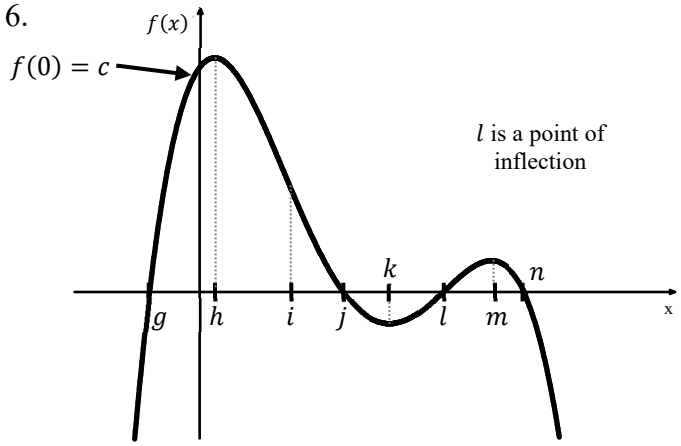
c. On what interval(s) is the graph increasing?

d. On what interval(s) is the graph decreasing?

e. Find the zeros of the function.

f. Find the y-intercept of the function.

6.



a. On what interval(s) is the graph concave up?

b. On what interval(s) is the graph concave down?

c. On what interval(s) is the graph increasing?

d. On what interval(s) is the graph decreasing?

e. Find the zeros of the function.

f. Find the y-intercept of the function.

Answers to 1.1 CA #2

1. **Dep**: Number of billboards. **Ind**: Number of cars registered.	2. **Dep**: Number of Thin Mints sold. **Ind**: Number of girls in the scout troop.	3. **Dep**: Hunger pains **Ind**: Time between meals	4. f is increasing on the interval $3 < x < 7$ because for all a and b in the interval, if $a < b$, then $f(a) < f(b)$.

5a. $x > i$	6a. $i < x < l$
5b. $x < i$	6b. $x < i$ and $x > l$
5c. $x < h$ and $x > k$	6c. $x < h$ and $k < x < m$
5d. $h < x < k$	6d. $h < x < k$ and $x > m$
5e. $x = g, x = j$ and $x = l$	6e. $x = g, x = j, x = l$, and $x = n$
5f. $y = a$	6f. $y = c$