Algebra 1 CC
Assignment #25
Introduction to Functions

1. In each of the following examples, use an input-output chart to decide if the following relation is a function.

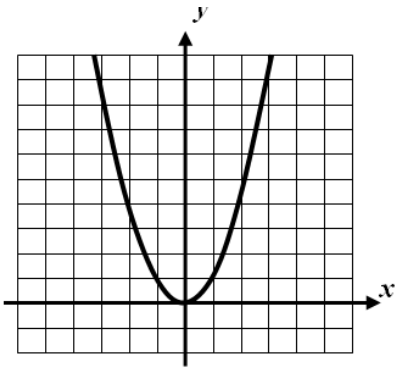
(a) Consider the following relation: multiply the input by five and then subtract seven to get the output.

Input x	Calculation	Output y
-3		
0		
6		

(b) Consider the following table;

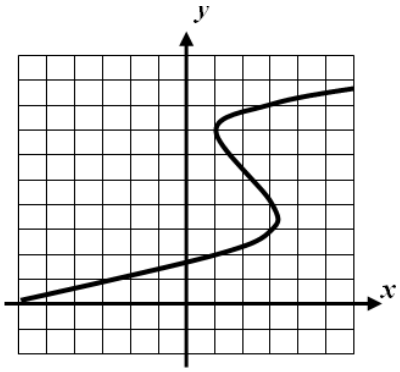
Input x	Calculation	Output y
-2	None	4
3	None	3
3	None	2

(c) Consider the following graph



Input x	Calculation	Output(s) y
-2	None	
1	None	
2	None	

(d) Consider the following graph



Input x	Calculation	Output(s) y
-3	None	
1	None	
3	None	

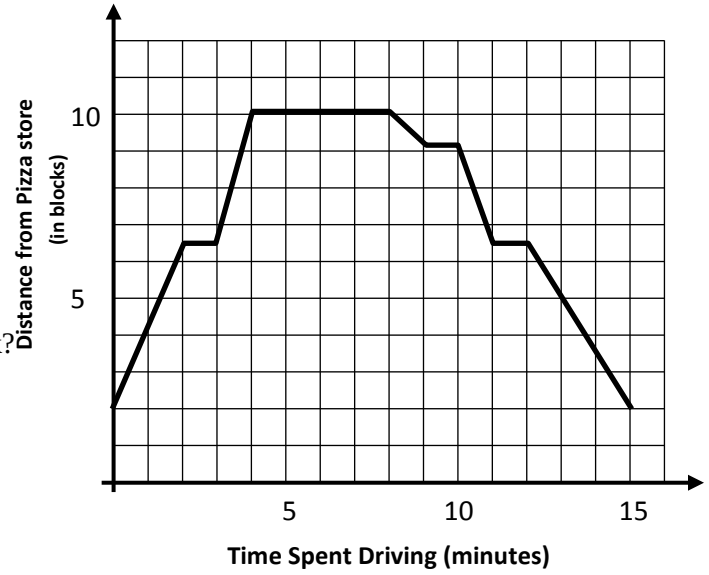
2. Andrew has a new job at the local pizza store as a delivery boy. The following graph shows one of his deliveries he made. Analyze the graph and answer the following questions.

(a) How long was the entire trip?

(b) If he arrived at the house after 4 minutes, how far away was the house from the pizza place?

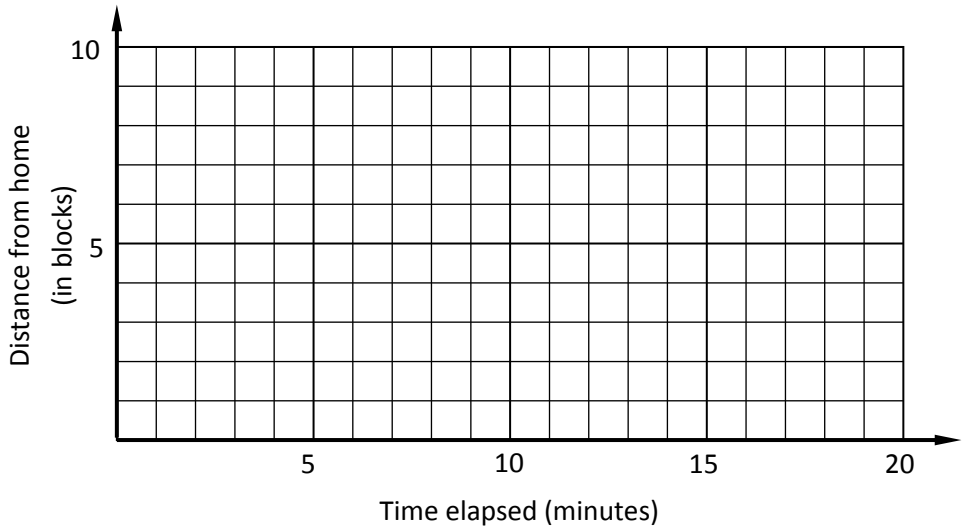
(c) Why might Andrew have stopped 3 times for 1 minute?

(d) Was Andrew's trip longer going to the house or coming back?



3. Given the following scenario, graph a function that would map Liza's distance away from her house according to the time elapsed.

Liza has a few items she needs to pick up from a grocery store 8 blocks away. Liza travels as a constant rate of 2 blocks per minute when not stopped at a light. On her way to the grocery store she doesn't hit any red lights and the trip takes her 4 minutes. She spends 8 minutes in the grocery store and then starts to head home. When she's halfway home she hits a red light that lasts 3 minutes. After the light ends, she then drives the second half of the way home.



R1. Solve for *y*. $2x-5y=-9$

R2. Given $A=\frac{1}{2}bh$

a. Solve for b

b. What is the value of h when $b=6$ and $A=25.2$?

R3. The square of a number, n, is equal to the sum of that number and 5. Write an equation that represents this relationship?

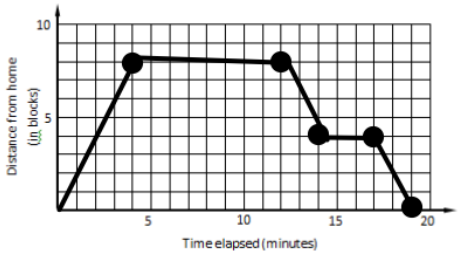
R4. Subtract: $\left(3y^2-7y+8\right)-\left(2y^2-6y-10\right)$

R5. Solve for x: $\frac{x}{4}-1=2$

R6. What is the equation when $ax-b=c$ is solved for x in terms of a, b and c.

1a) Yes
1b) No
1c) Yes
1d) No
2a) 15 minutes
2b) about 10 blocks
2c) Red lights
2d) coming back

3)



R1 $y=\frac{2x+9}{5}$ *or* $y=\frac{-2x-9}{5}$

R2. a. $b=\frac{2A}{h}$

b. h=8.4

R3. $n^2=n+5$

R4. y^2-y+18

R5. x=12

R6. $x=\frac{c+b}{a}$