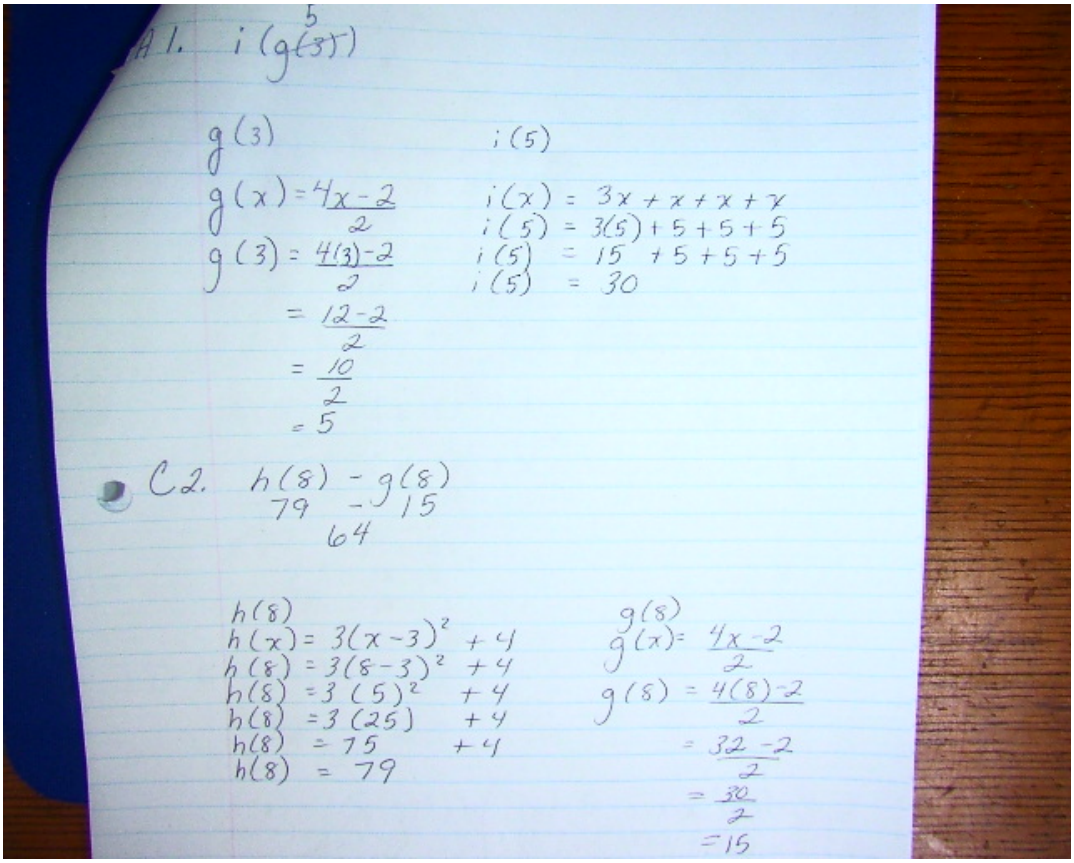


A1. $i(g(3))$

$g(3)$

$g(x) = \frac{4x-2}{2}$

$g(3) = \frac{4(3)-2}{2}$

$= \frac{12-2}{2}$

$= \frac{10}{2}$

$= 5$

$i(5)$

$i(x) = 3x + x + x + x$

$i(5) = 3(5) + 5 + 5 + 5$

$i(5) = 15 + 5 + 5 + 5$

$i(5) = 30$

C2. $h(8) - g(8)$

$79 - 15$

64

$h(8)$

$h(x) = 3(x-3)^2 + 4$

$h(8) = 3(8-3)^2 + 4$

$h(8) = 3(5)^2 + 4$

$h(8) = 3(25) + 4$

$h(8) = 75 + 4$

$h(8) = 79$

$g(8)$

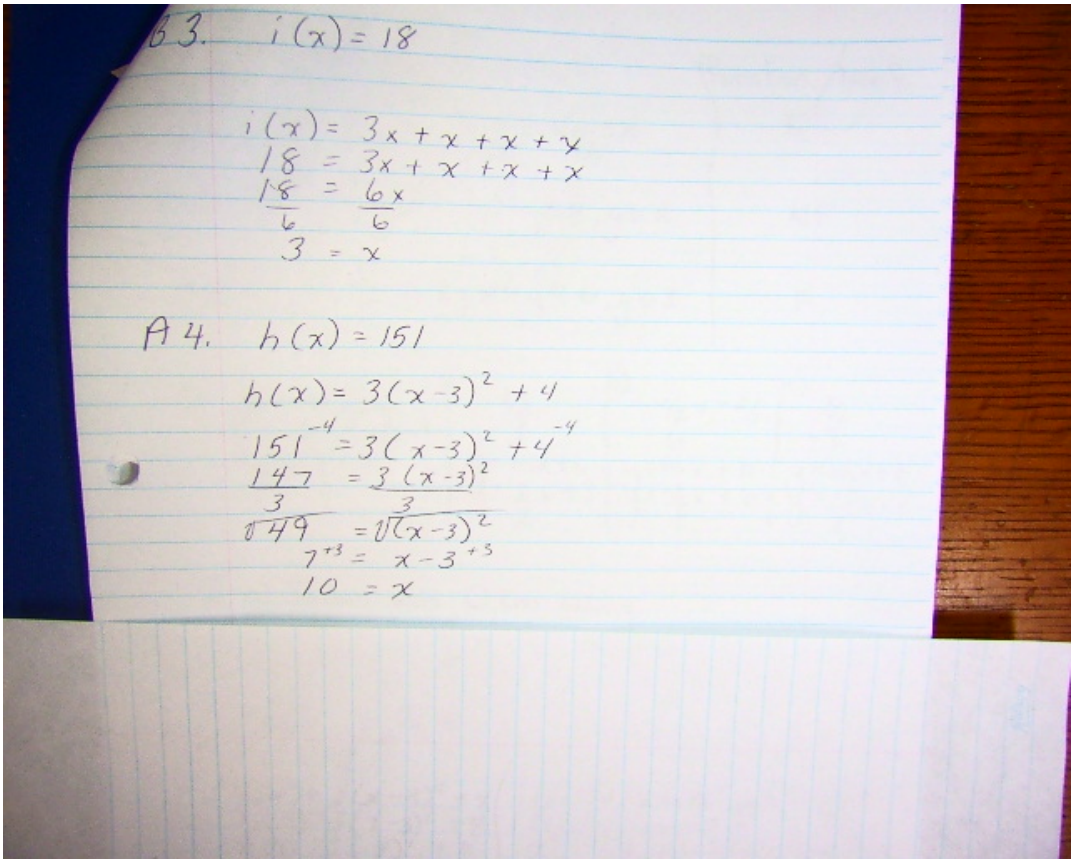
$g(x) = \frac{4x-2}{2}$

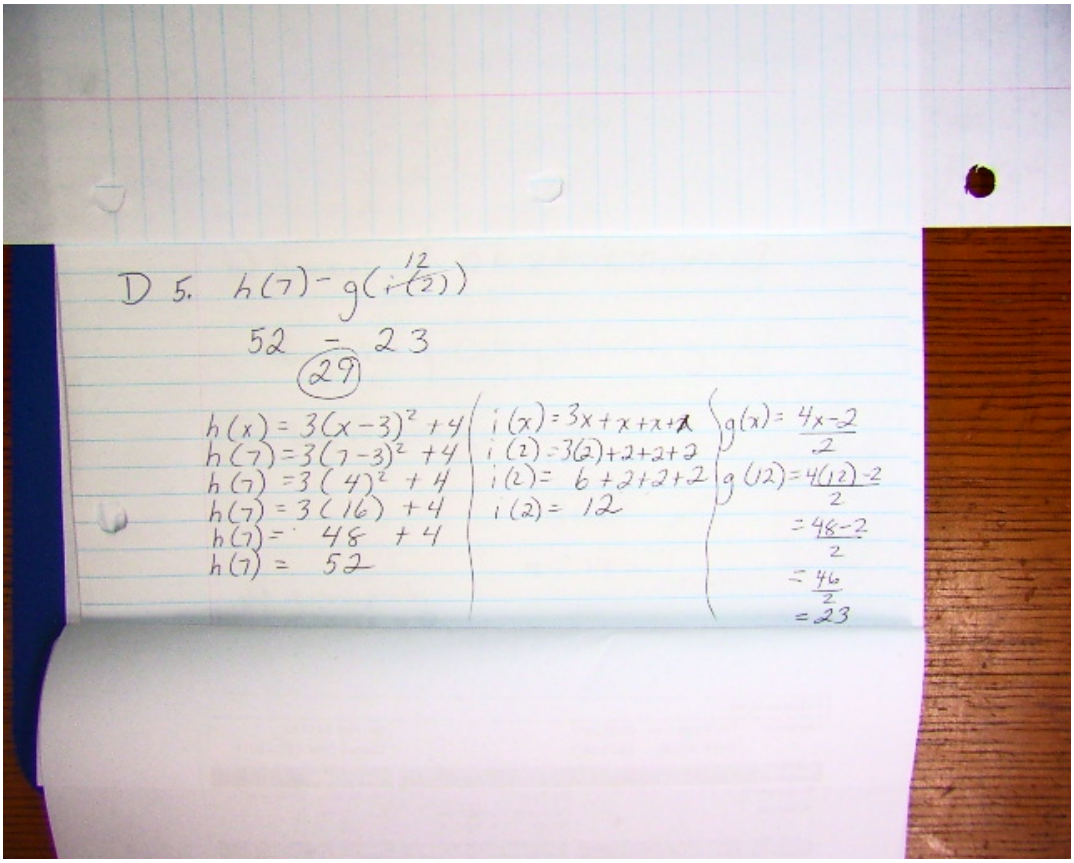
$g(8) = \frac{4(8)-2}{2}$

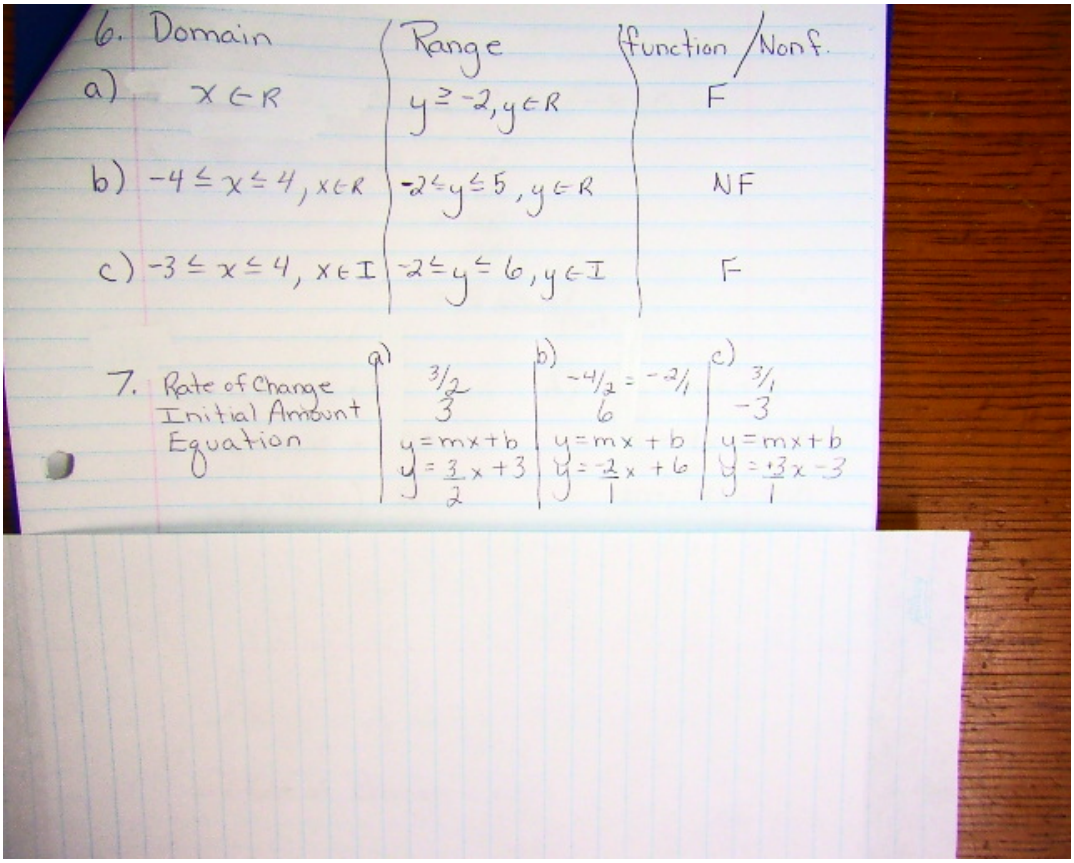
$= \frac{32-2}{2}$

$= \frac{30}{2}$

$= 15$


63. i(x) = 18
i(x) = 3x + x + x + x
18 = 3x + x + x + x
18/6 = 6x/6
3 = x
A 4. h(x) = 151
h(x) = 3(x-3)^2 + 4
151 -4 = 3(x-3)^2 + 4 -4
147/3 = 3(x-3)^2/3
√49 = √(x-3)^2
7 +3 = x - 3 +3
10 = x


D 5. h(7) - g(i(2))
52 - 23
29
h(x) = 3(x-3)² + 4
h(7) = 3(7-3)² + 4
h(7) = 3(4)² + 4
h(7) = 3(16) + 4
h(7) = 48 + 4
h(7) = 52
i(x) = 3x + x + x + 2
i(2) = 3(2) + 2 + 2 + 2
i(2) = 6 + 2 + 2 + 2
i(2) = 12
g(x) = 4x - 2 / 2
g(12) = 4(12) - 2 / 2
= 48 - 2 / 2
= 46 / 2
= 23



6. Domain | Range | function / Non f.

a) $x \in R$ | $y \geq -2, y \in R$ | F

b) $-4 \leq x \leq 4, x \in R$ | $-2 \leq y \leq 5, y \in R$ | NF

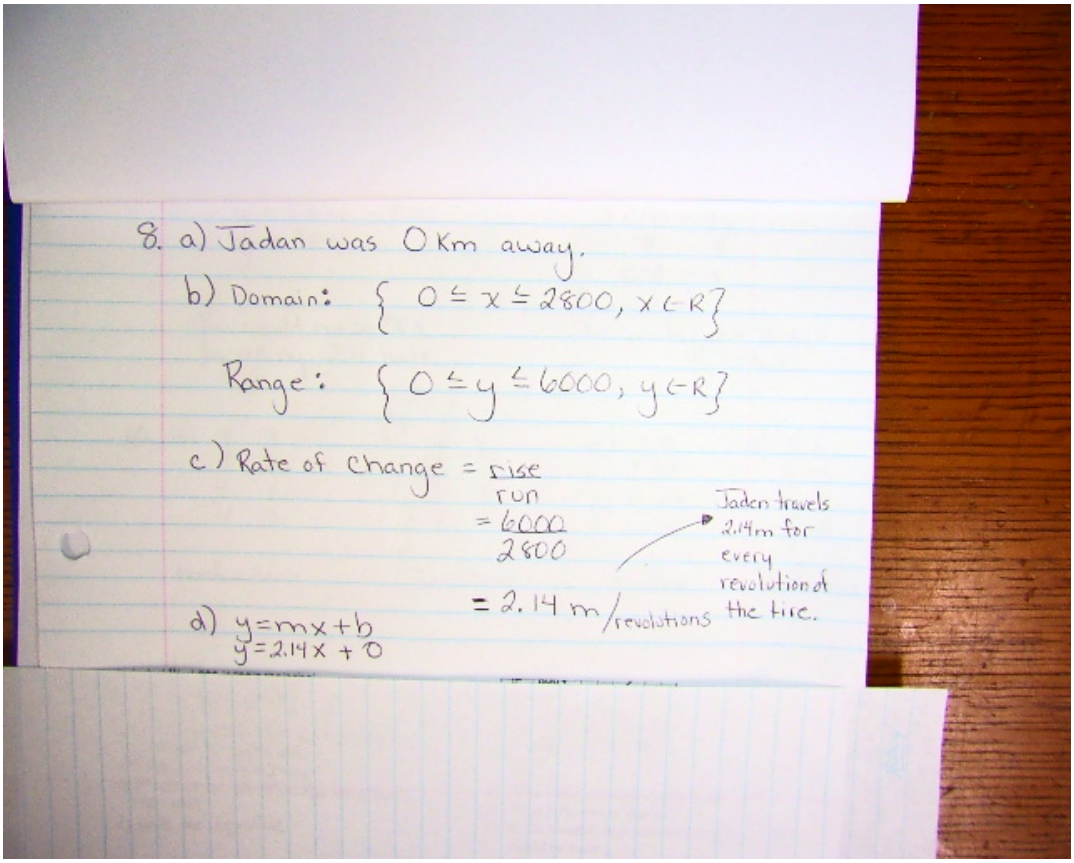
c) $-3 \leq x \leq 4, x \in I$ | $-2 \leq y \leq 6, y \in I$ | F

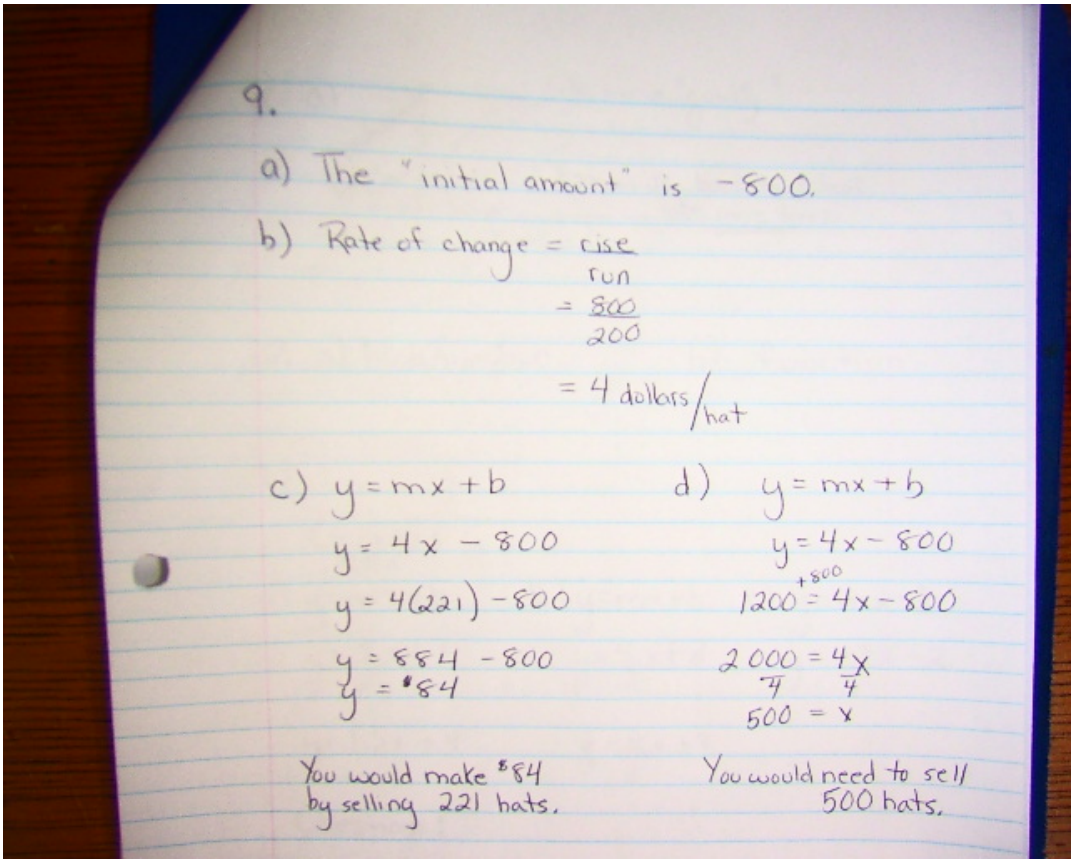
7. Rate of Change / Initial Amount / Equation

a) $\frac{3}{2}$ / 3 / $y = mx + b$ / $y = \frac{3}{2}x + 3$

b) $\frac{-4}{2} = \frac{-2}{1}$ / 6 / $y = mx + b$ / $y = \frac{-2}{1}x + 6$

c) $\frac{3}{1}$ / -3 / $y = mx + b$ / $y = \frac{+3}{1}x - 3$


8. a) Jadan was 0 Km away.
b) Domain: $\{0 \leq x \leq 2800, x \in R\}$
Range: $\{0 \leq y \leq 6000, y \in R\}$
c) Rate of Change = rise / run
= 6000 / 2800
= 2.14 m/revolutions
Jaden travels 2.14m for every revolution of the tire.
d) y=mx+b
y=2.14x+0



9.

a) The "initial amount" is −800.

b) Rate of change = $\frac{\text{rise}}{\text{run}}$

$= \frac{800}{200}$

$= 4 \text{ dollars/hat}$

c) $y = mx + b$

$y = 4x - 800$

$y = 4(221) - 800$

$y = 884 - 800$

$y = 84$

You would make $84 by selling 221 hats.

d) $y = mx + b$

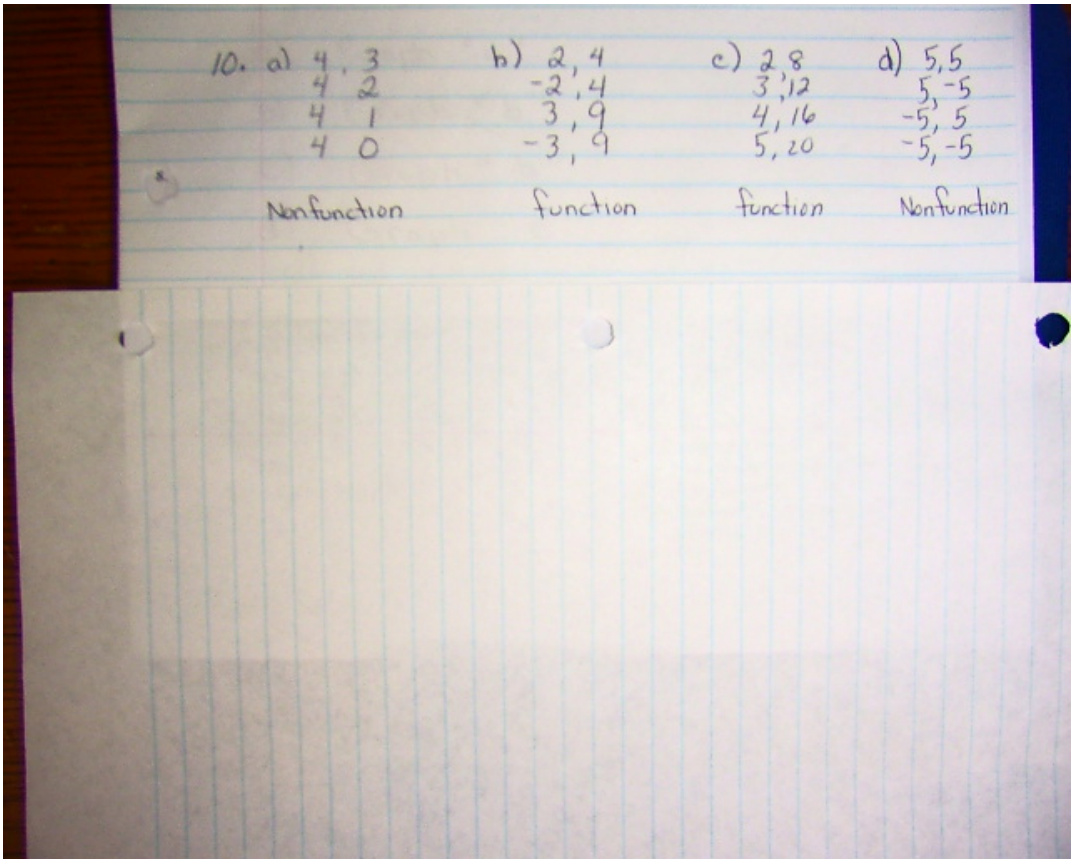
$y = 4x - 800$

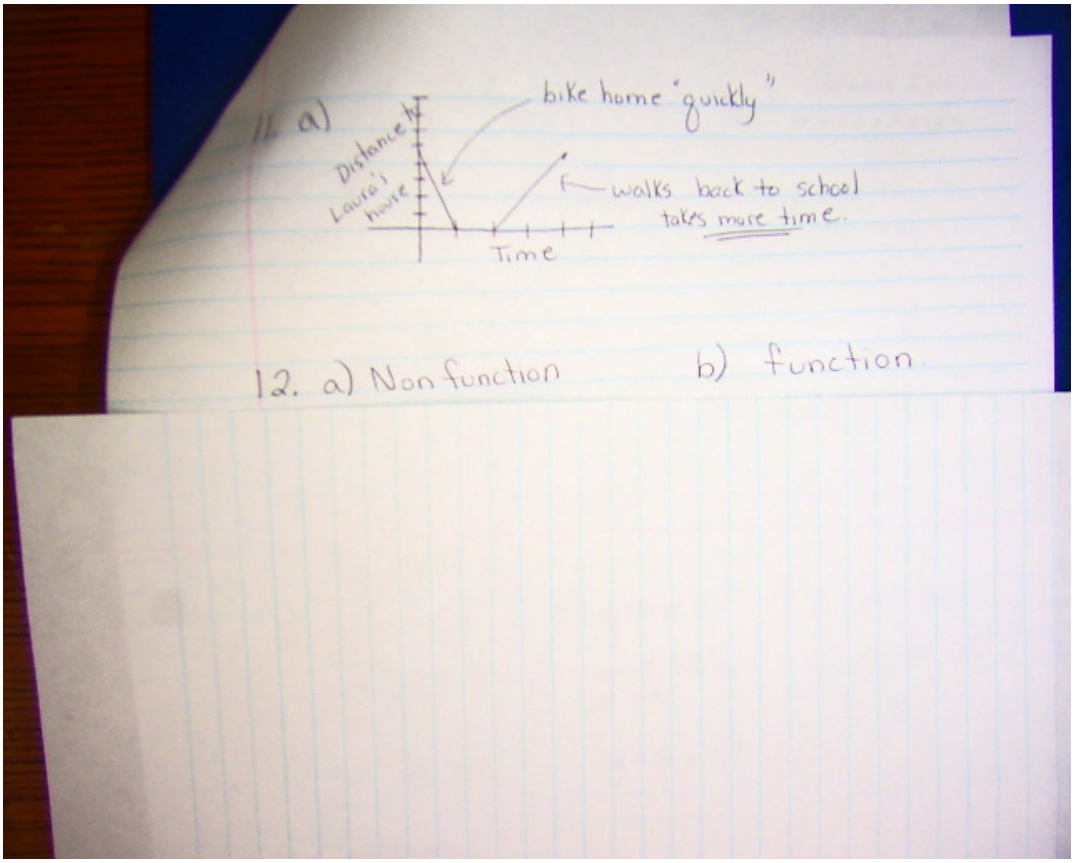
$1200 = 4x - 800$ (+800)

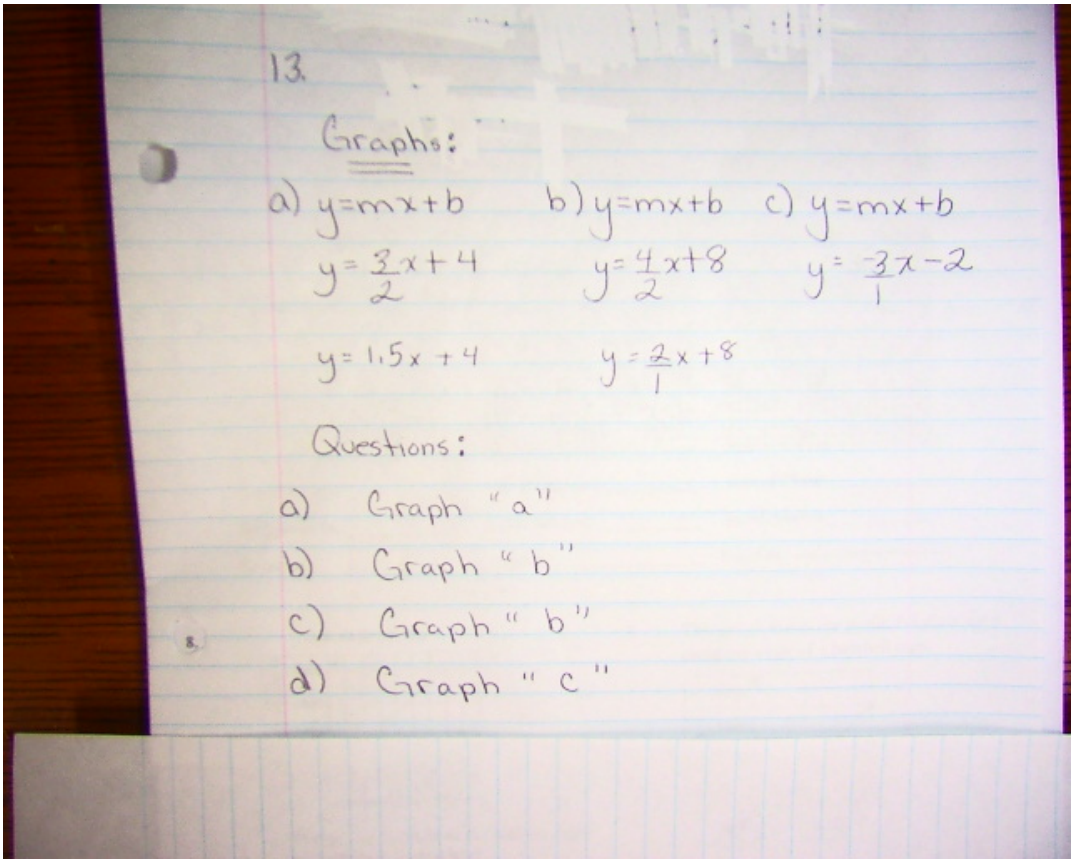
$\frac{2000}{4} = \frac{4x}{4}$

$500 = x$

You would need to sell 500 hats.


10. a) 4, 3
4, 2
4, 1
4, 0
Nonfunction
b) 2, 4
-2, 4
3, 9
-3, 9
function
c) 2, 8
3, 12
4, 16
5, 20
function
d) 5, 5
5, -5
-5, 5
-5, -5
Nonfunction


11. a)
Distance from Laura's house
Time
bike home "quickly"
walks back to school takes more time.
12. a) Non function
b) function


13.

Graphs:

a) $y=mx+b$ b) $y=mx+b$ c) $y=mx+b$

$y=\frac{3}{2}x+4$ $y=\frac{4}{2}x+8$ $y=\frac{-3}{1}x-2$

$y=1.5x+4$ $y=\frac{2}{1}x+8$

Questions:

a) Graph "a"

b) Graph "b"

c) Graph "b"

d) Graph "c"