1. a) Domain: $x \in R$.
Range: $y \geq -4, y \in R$.

b) Domain: $x \in R$.
Range: $y \leq 8, y \in R$.

c) Domain: $-4 \leq x \leq 6, x \in R$.
Range: $-10 \leq y \leq 10, y \in R$.

2. a) Non Function.
Domain: $-3 \leq x \leq 9, x \in R$.
Range: $-7 \leq y \leq 5, y \in R$.

b) Function.
Domain: $-8 \leq x \leq 8, x \in R$.
Range: $-4 \leq y \leq 8, y \in R$.

c) Non Function
Domain: $-8 \leq x \leq 4, x \in R$.
Range: $-8 \leq y \leq 8, y \in R$.

3. a) 10 seconds
b) 6.5 seconds

c) Non Function
Domain : $-8 \leq x \leq 4$, $x \in R$.
Range : $-8 \leq y \leq 8$, $y \in R$.

3. a) 10 seconds
b) 6.5 seconds

4. (a) Domain : $(x: 0, 5, 10, 15, 20)$
Range : $(y: 0, 1, 2, 3, 4)$
Function.

b) Domain : $(x: 0, 1, 2, 4)$
Range : $(y: 3, 1, 2, 4)$
Non Function.

c) Domain :
$(x: 0, 5, 1, 7, 15)$
Range :
$(y: 5, 6, 2, 9, 4)$
Function.

d) Domain: (x: | 0, 8, 10, 15, 20)
Range: (y: | 6, 1, 3, 4)
Function

e) Domain: (x: | 10, 16, 12, 10, 19)
Range: (y: | 8, 4, 7, 3, 6)
Non Function

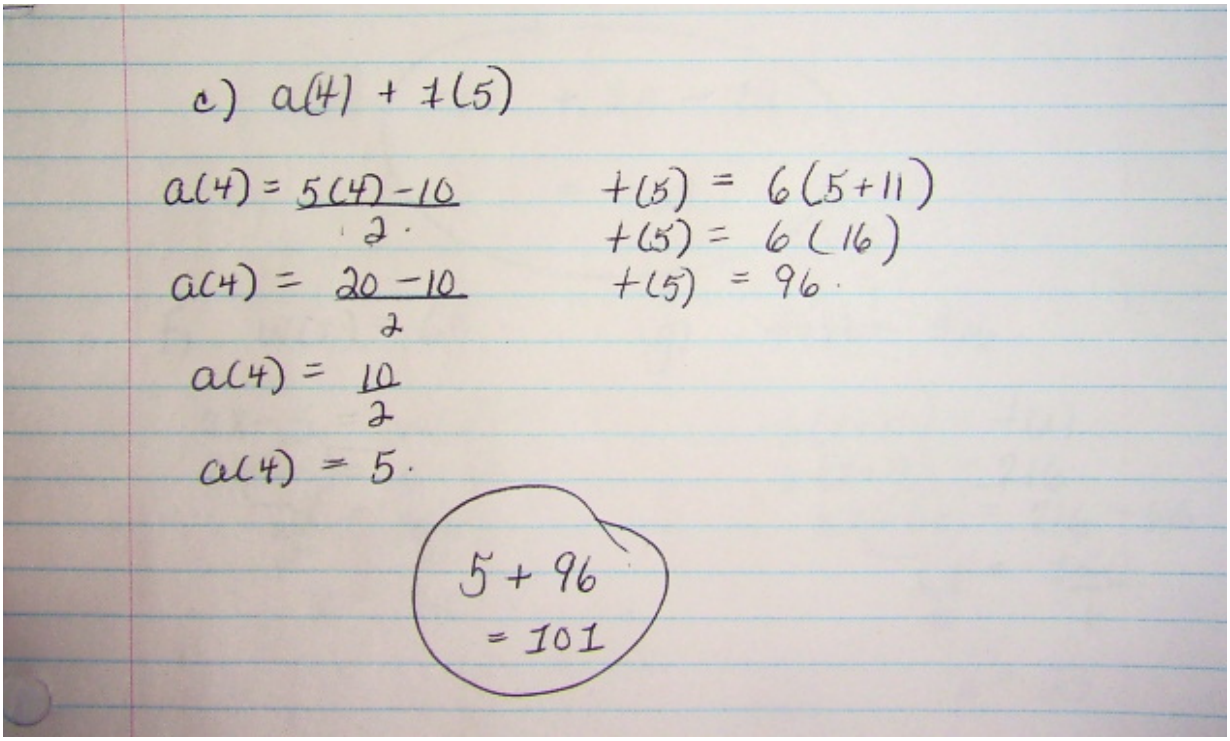
5. a) $h(7)$

$h(x) = 2(x-8)$
$h(7) = 2(7-8)$
$h(7) = 2(-1)$
$h(7) = -2$

b) $w(15)$

$w(x) = 2x-5$
$w(15) = 2(15)-5$
$w(15) = 30-5$
$w(15) = 25$

c) $a(4) + t(5)$


c) a(4) + t(5)
a(4) = 5(4) - 10 / 2
a(4) = 20 - 10 / 2
a(4) = 10 / 2
a(4) = 5.
t(5) = 6(5+11)
t(5) = 6(16)
t(5) = 96.
5 + 96
= 101

d) $w(h(2))$

$h(2) = 2(2-8)$
$= 2(-6)$
$= -12.$

$w(-12) = 2(-12) - 5.$
$= -24 - 5$
$= -29$

e) $h(3) + a(10) - t(2)$

$h(3) = 2(3-8)$
$h(3) = 2(-5)$
$h(3) = -10$

$a(10) = \frac{5(10)-10}{2}$
$a(10) = \frac{50-10}{2}$
$a(10) = \frac{40}{2}$
$a(10) = 20$

$t(2) = 6(2+11)$
$t(2) = 6(13)$
$t(2) = 78$

$-10 + 20 - 78$
$= -68$

$= -68$

f) $w(x) = 63$.

$2x - 5 = w(x)$

$2x - 5 = 63 + 5$.

$\frac{2x}{2} = \frac{68}{2}$

$x = 34$

g) $t(x) = 216$.

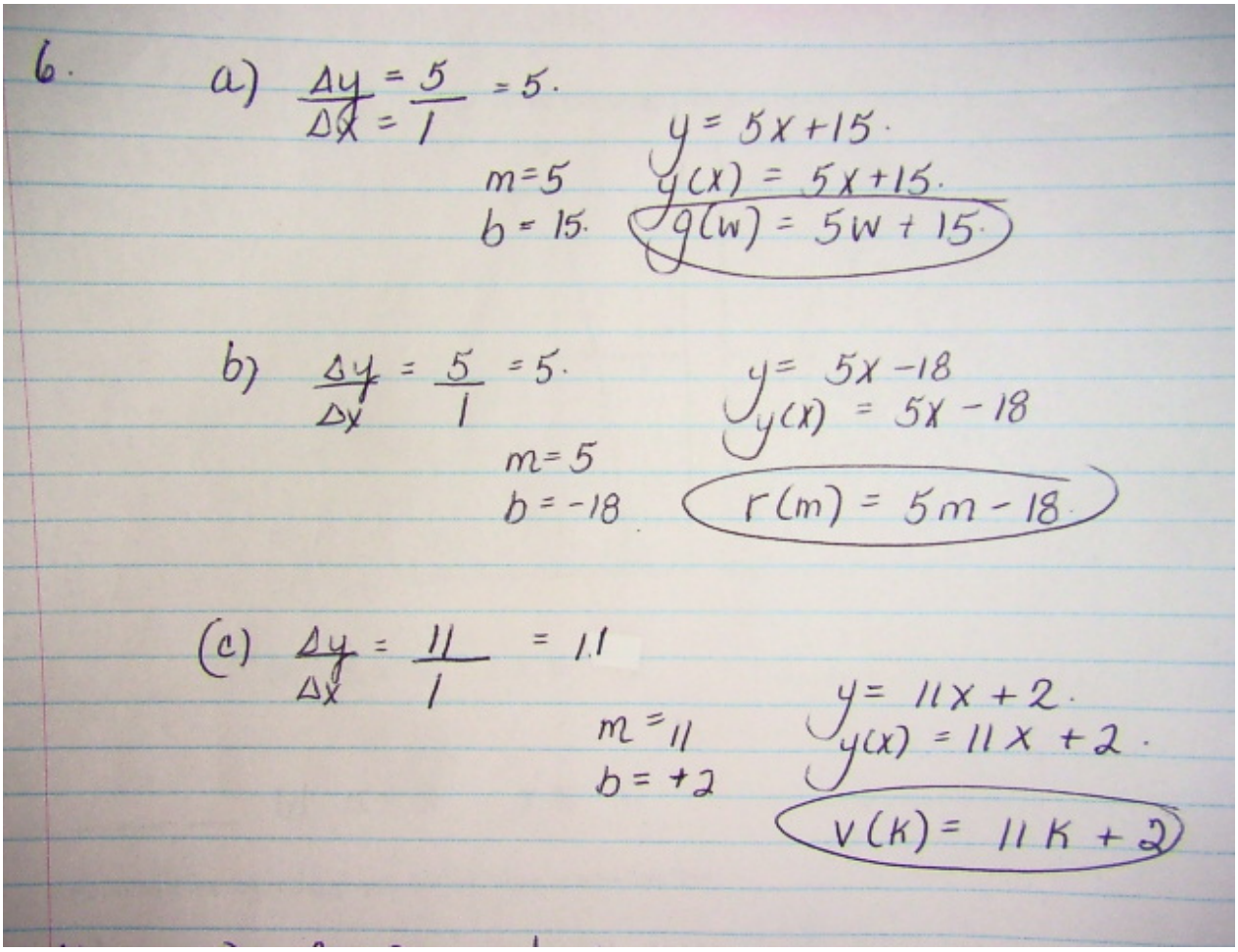
$6(x+11) = t(x)$

$6(x+11) = 216$.

$6x + 66 = 216 - 66$

$\frac{6x}{6} = \frac{150}{6}$

$x = 25$.


6.
a) $\frac{\Delta y}{\Delta x} = \frac{5}{1} = 5$.
$m = 5$
$b = 15$.
$y = 5x + 15$.
$y(x) = 5x + 15$.
$g(w) = 5w + 15$.
b) $\frac{\Delta y}{\Delta x} = \frac{5}{1} = 5$.
$m = 5$
$b = -18$
$y = 5x - 18$
$y(x) = 5x - 18$
$r(m) = 5m - 18$.
(c) $\frac{\Delta y}{\Delta x} = \frac{11}{1} = 11$
$m = 11$
$b = +2$
$y = 11x + 2$.
$y(x) = 11x + 2$.
$v(k) = 11k + 2$

$\frac{\Delta y}{\Delta x} \quad \frac{11}{1}$

$m = 11$

$b = +2$

$y = 11x + 2.$

$y(x) = 11x + 2.$

$v(k) = 11k + 2$

7. a) A - B and C - D
b) O - A
c) B - C and D - E