

1.1.c) $(|-4 \Rightarrow |-8) \quad 8/2$

1-4 a) $f(4) = \frac{1}{4-2} = \boxed{\frac{1}{2}}$

b) $\frac{1}{1} = \frac{1}{x-2}$

$x-2=1$
 $+2+2$

$\boxed{x=3}$

1-5 a) $g(6) = \sqrt{6-5} = \sqrt{1} = 1$

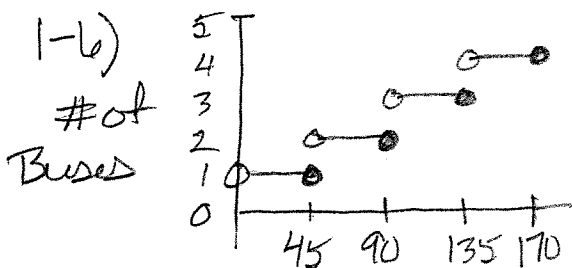
$h(1) = 1^2 - 3(1) = -5 \quad X$

$h(6) = 36 - 6 = 30$

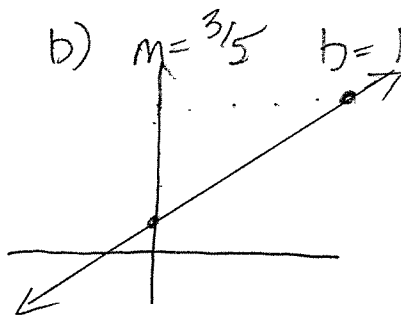
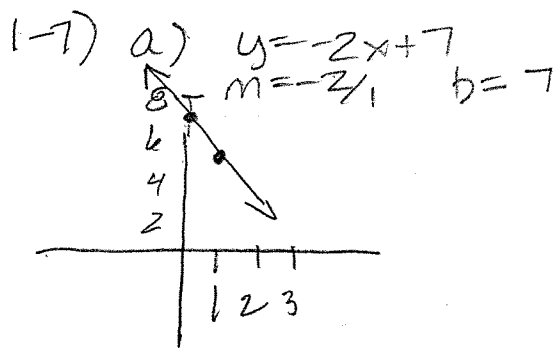
$g(30) = \sqrt{30-5} = \sqrt{25} = 5 \quad \checkmark$

$h(x)$ first then $g(x)$

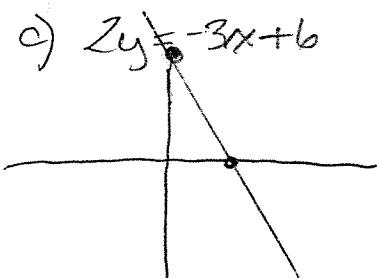
b) yes $g(6)$ first then $h(x)$



- 1-8) a) Not Linear
b) Exponent
c) Parabola

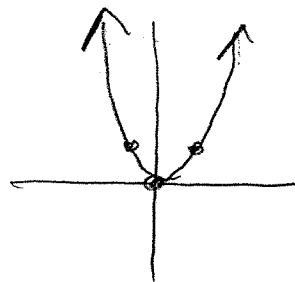


x	y
0	3
2	0



d) $y = x^2$

x	y
-1	1
0	0
1	1

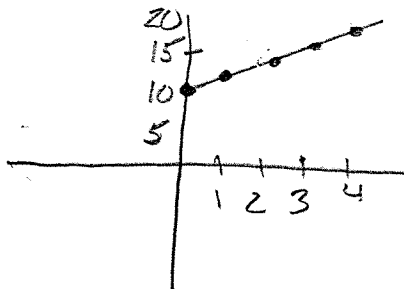


1.1.2 (1-12 \Rightarrow 1-18) 8/22

1-12)

X	Y
0	10
1	12
2	14
3	16
4	18

$m=2$ (constant change)
 $b=0$ (initial value)



$$y=2x+10$$

1-13) a) $(x+13)=0$
 $x=-13$

$$x-7=0$$

 $x=7$

b) $2x+3=0$
 $2x=-3$
 $x=-3/2$

$$3x-7=0$$

 $3x=7$
 $x=7/3$

c) $x=0$

$$x-3=0$$

 $x=3$

d) $x^2-5x=0$
 $x(x-5)=0$

$$x=0$$

 $x-5=0$
 $x=5$

e) $x^2-2x-35=0$

$$x-7=0$$

$$x+5=0$$

$$(x-7)(x+5)=0$$

$$x=7$$

$$x=-5$$

f) $3x^2+14x-5=0$

$$3(-5)=-15 \quad \text{use } +15 \text{ and } -1$$

$$3x^2+15x-1x-5=0$$

$$3x(x+5)-1(x+5)=0$$

$$(3x-1)(x+5)=0$$

$$3x-1=0$$

$$3x=1$$

$$x=1/3$$

$$x+5=0$$

$$x=-5$$

1-14)

x	3	10	20	x	-1	0	1	2	3	4	5	6	7	8	9	10
y	8	29	59	y	-4	-1	2	5	8	11	14	17	20	23	26	29

a) add 3 each time

when $x=5$ $y=14$

when $x=-1$ $y=-4$

constant change = +3

initial value = -1

b) $y = 3x - 1$

1-15 a) $y = 5x - 2$

b) $0 = 5x - 2$

$2 = 5x$
 $x = \frac{2}{5}$

1-16 a) $y = 3x + 15$

$y = 3(2) + 15 = 21$

$y = 3(0) + 15 = 15$

crosses when x is zero
 $(0, 15)$

b) $y = 3 - 3x$

$y = 3 - 3(2) = -3$

$y = 3 - 3(0) = 3$

crosses @
 $(0, 3)$

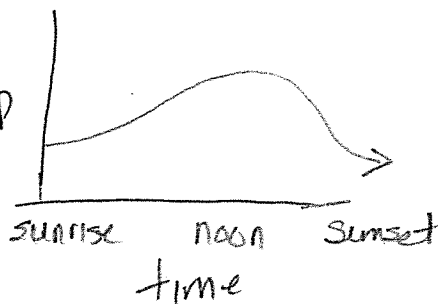
1-17 a) $(3)^2 + 2(3) + 1 = 9 + 6 + 1 = 16$

b) $(-4)^2 + 2(-4) + 1 = 16 - 8 + 1 = 9$

c) $(-22.87)^2 + 2(-22.87) + 1 = 478.38$

1-18 a) y depends on x
 x is independent

c) temp



b) dependent - temp
independent - time