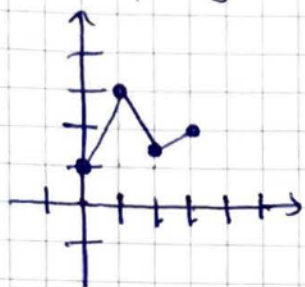


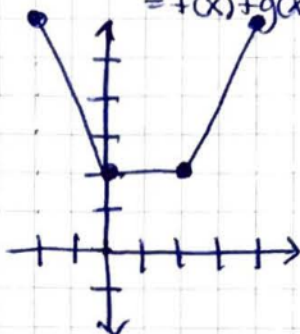
Sec 1.4 Decompose Part 2 pg 116 #23, 25, 51-53, 57-63 add.

#23) $h(x) = (f+g)(x)$
 $= f(x) + g(x)$



x	h(x)
0	2 + -1 = 1
1	3 + 0 = 3
2	1.5 + 1 = 1.5
3	2 + 0 = 2

#25) $h(x) = (f+g)(x)$
 $= f(x) + g(x)$



x	h(x)
-2	2 + 4 = 6
0	0 + 2 = 2
2	2 + 0 = 2
4	4 + 2 = 6

#51) a) $(f+g)(3) = f(3) + g(3)$
 $= 2 + 1$
 $= \boxed{3}$

#52) a) $(f-g)(1) = f(1) - g(1)$
 $= 2 - 3$
 $= \boxed{-1}$

b) $(f/g)(2) = \frac{f(2)}{g(2)} = \frac{0}{2} = \boxed{0}$

b) $(fg)(4) = f(4) \cdot g(4) = 4(0) = 0$

#53) $(f \circ g)(2) = f(g(2))$
 $= f(2)$
 $= 0$

#57) $h(x) = (2x+1)^2$
 $f(x) = x^2$ $g(x) = 2x+1$

$(g \circ f)(2) = g(f(2))$
 $= g(0)$
 $= \boxed{4}$

~~OR~~ $f(x) = (x+1)^2$ $g(x) = 2x$

#59) $h(x) = \sqrt[3]{x^2 - 4}$
 $f(x) = \sqrt[3]{x-4}$ $g(x) = x^2$

#61) $h(x) = \frac{1}{x+2}$

OK $f(x) = \sqrt[3]{-x}$ $g(x) = 4 - x^2$
~~OR~~ $f(x) = \sqrt[3]{x}$ $g(x) = (4 - x^2)^3$

OK $f(x) = \frac{1}{x+2}$ $g(x) = x$
~~OR~~ $f(x) = \frac{1}{x+1}$ $g(x) = x+1$

#63) $h(x) = (x+4)^2 + 2(x+4)$