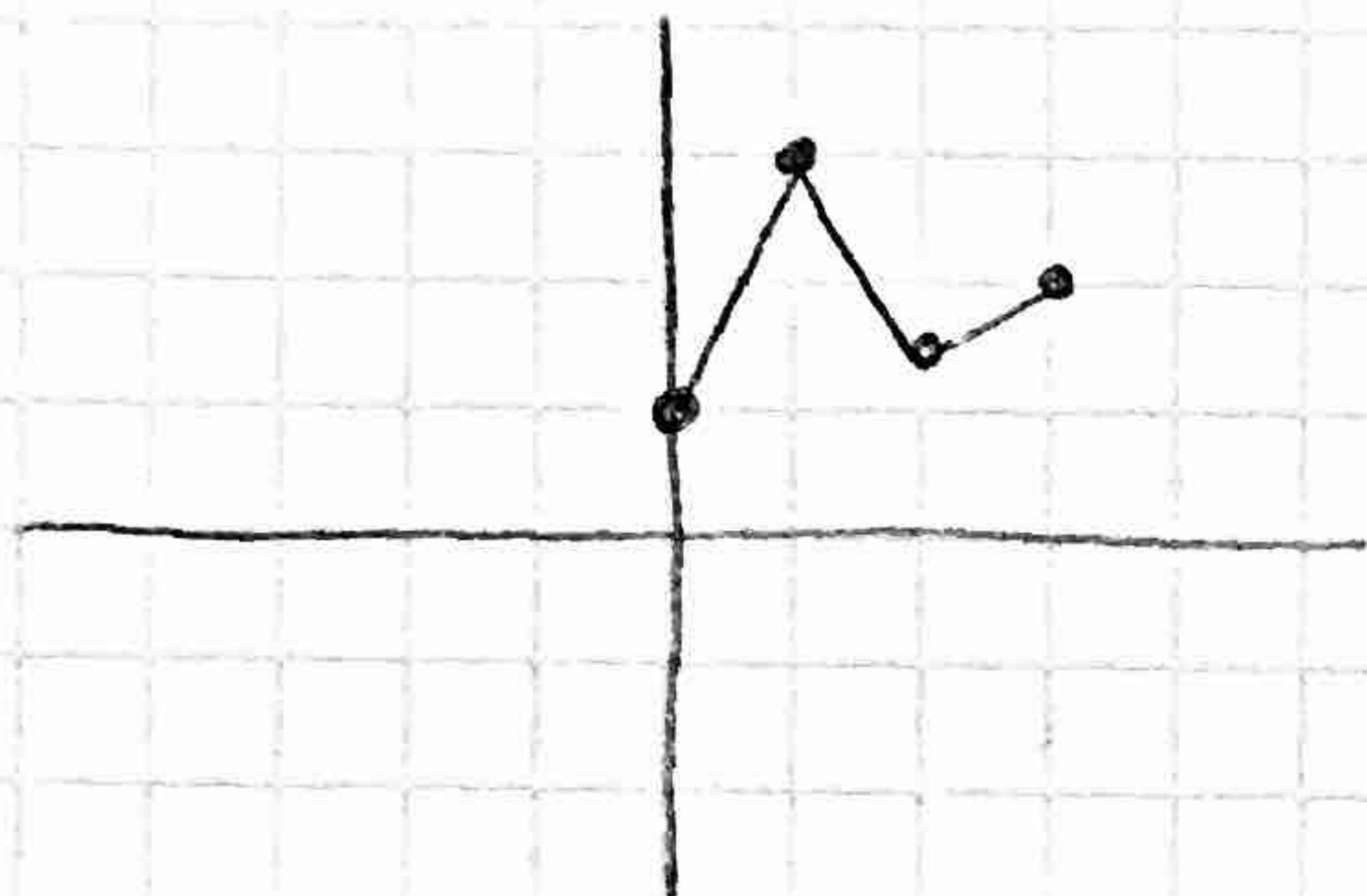


# HW 51

p 234 # 1, 2, 5, 6, 10, 17-20,  
40, 45-55

5. add y's

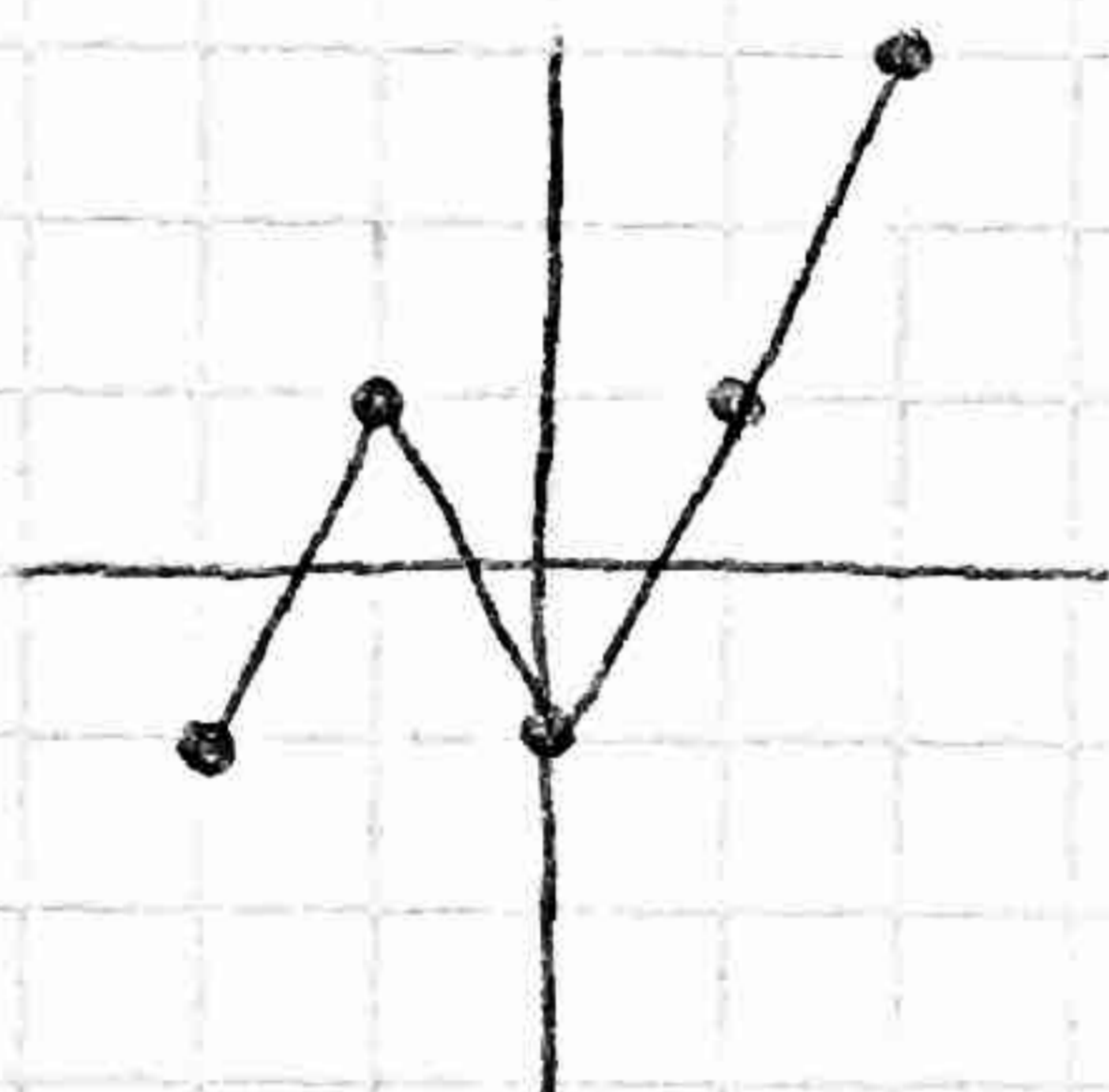


$$\begin{aligned} 17. f(2) + g(2) \\ &= 5 + -2 \\ &= -3 \end{aligned}$$

$$\begin{aligned} 18. f(-1) - g(-1) \\ &= 2 - (-5) \\ &= 7 \end{aligned}$$

$$\begin{aligned} 19. f(0) - g(0) \\ &= 1 - (-4) \\ &= 5 \end{aligned}$$

6.



$$\begin{aligned} 20. f(1) + g(1) \\ &= 2 + -3 \\ &= -1 \end{aligned}$$

$$\begin{aligned} 10. a) f(x) + g(x) \\ &= 2x - 5 + 2 - x \\ &= x - 3 \end{aligned}$$

$$\begin{aligned} 40. a) f(g(x)) \\ &= \left(\frac{1}{x}\right)^3 \\ &= \frac{1}{x^3} \end{aligned}$$

$$\begin{aligned} b) f(x) - g(x) \\ &= 2x - 5 - (2 - x) \\ &= 3x - 7 \end{aligned}$$

$$\begin{aligned} b) g(f(x)) \\ &= \frac{1}{x^3} \end{aligned}$$

$$\begin{aligned} c) f(x) \cdot g(x) \\ &= (2x - 5)(2 - x) \\ &= 4x - 10 - 2x^2 + 5x \\ &= -2x^2 + 9x - 10 \end{aligned}$$

$$\begin{aligned} c) g(g(x)) \\ &= \frac{1}{\frac{1}{x}} \end{aligned}$$

$$d) \frac{2x - 5}{2 - x} \quad x \neq 2$$

$$= x$$

$$45. a) f(g(x)) = |x+6|$$

$$D: (-\infty, \infty)$$

$$b) g(f(x)) = |x|+6$$

$$D: (-\infty, \infty)$$

$$46. a) f(g(x)) = |3-x-4|$$

$$= |1-x-1|$$

$$D: (-\infty, \infty)$$

$$b) g(f(x)) = 3 - |x-4|$$

$$D: (-\infty, \infty)$$

$$47. a) f(g(x)) = \frac{1}{x+3} \quad x \neq -3$$

$$b) g(f(x)) = \frac{1}{x} + 3 \quad x \neq 0$$

~~48~~

$$49. a) f(3) + g(3)$$

$$= 2 + 1 = 3$$

$$b) f(2) / g(2)$$

$$= 0$$

$$50. a) f(1) - g(1)$$

$$= -1$$

$$b) f(4) \cdot g(4)$$

$$= 0$$

$$51. a) f(g(2)) = f(2) = 0$$

$$b) g(f(2)) = g(0) = 4$$

$$52. a) f(g(1)) = f(3) = 2$$

$$b) g(f(3)) = g(2) = 2$$

$$53. f(x) = x^2$$

$$g(x) = 2x+1$$

$$54. f(x) = x^3$$

$$g(x) = 1-x$$

$$55. f(x) = 3\sqrt{x}$$

$$g(x) = x^2 - 4$$