
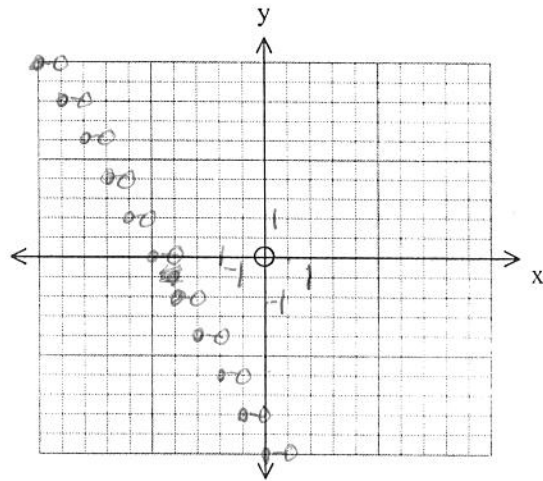



A. Graph each of the following functions:

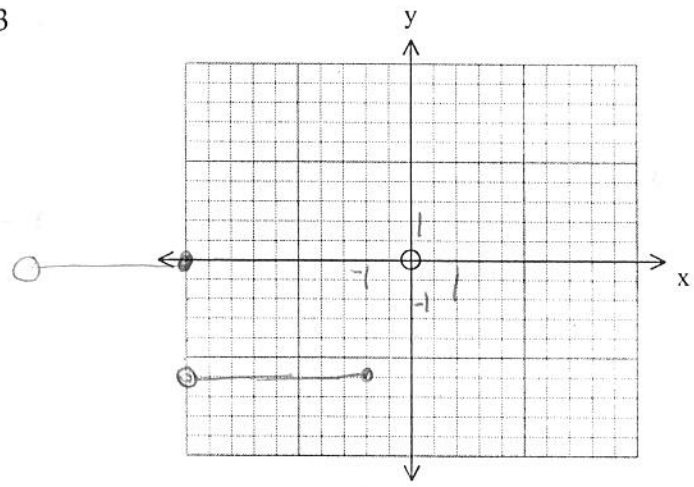
1) $f(x) = -[2(x+1)] - 3$

height = 1
 length = $\frac{1}{2}$
 $V(-1, -3)$
 Decreasing





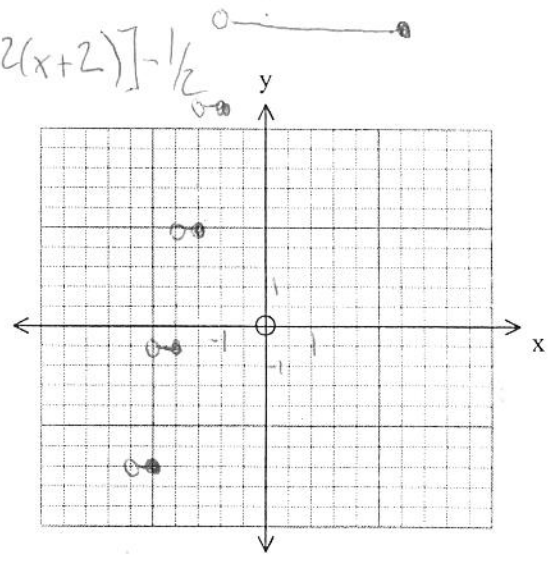
2) $f(x) = 3\left[-\frac{1}{4}(x+1)\right] - 3$

height = 3
 Length = 4
 $V(-1, -3)$
 Decreasing




3. $f(x) = -3[-2x-4] - \frac{1}{2} = -3[-2(x+2)] - \frac{1}{2}$

height = 3
 Length = $\frac{1}{2}$
 $V(-2, -\frac{1}{2})$
 increasing




$$4) f(x) = -2 \left[\frac{(x+2)}{3} \right] - 1$$

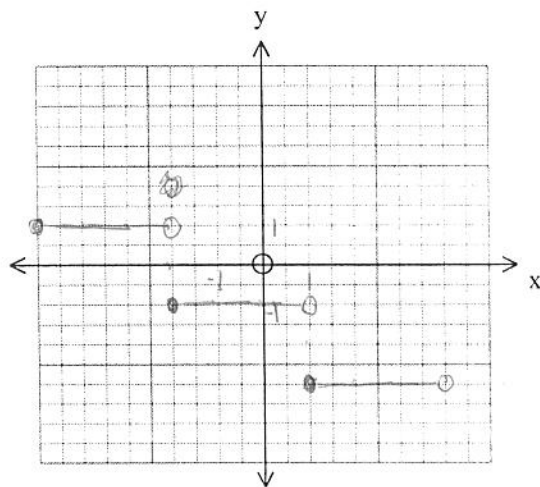
height = 2

Length = 3

V(-2, -1)

Decreasing

•—○



$$5) f(x) = 5 \left[\frac{1}{2}x + 4 \right] - 10$$

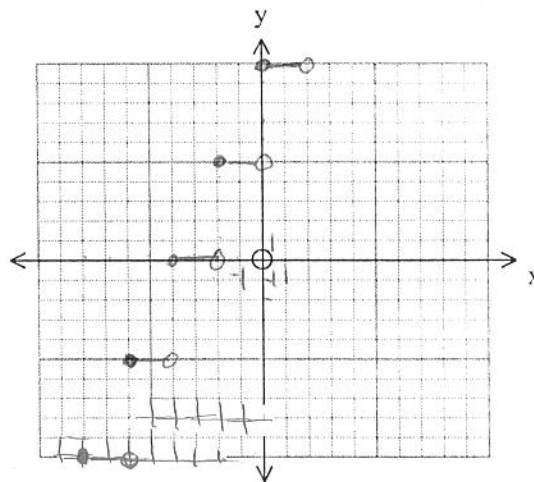
height = 5

Length = 2

V(-8, -10)

increasing

•—○



$$6) f(x) = \frac{1}{2} \left[\frac{2x-8}{3} \right] + \frac{1}{2}$$

height = 1/2

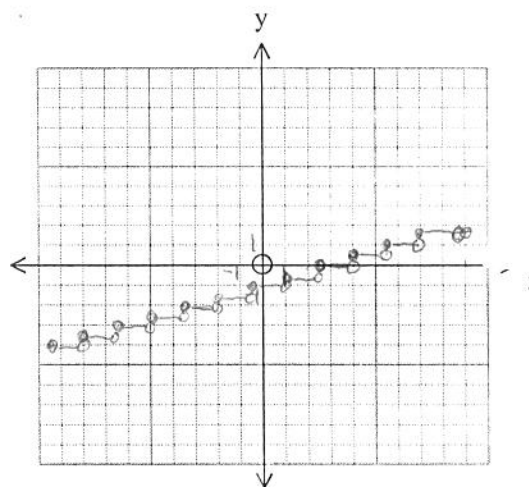
length = 3/2

V(4, 1/2)

increasing

•—○

$$\frac{2}{3}(x-4)$$



B. Determine the zeros of each of the functions in Part A.

- 1) $-\frac{5}{2} \leq x < -2$
- 2) $9 < x \leq 5$
- 3) None \emptyset
- 4) None \emptyset
- 5) $-4 \leq x \leq 2$
- 6) $\frac{5}{2} \leq x < 4$

C. Solve each of the following equations:

1) $-[2(x+1)] - 3 = -9$
 $-[2(x+1)] = -6$
 $[2(x+1)] = 6$
 $6 \leq 2(x+1) < 7$
 $3 \leq x+1 < 7/2$
 $2 \leq x < 9/2$

2) $3[-\frac{1}{4}(x+1)] - 3 = 24$
 $3[-\frac{1}{4}(x+1)] = 27$
 $[-\frac{1}{4}(x+1)] = 9$
 $9 \leq -\frac{1}{4}(x+1) < 10$
 $36 \leq -(x+1) < 40$

$-36 \geq x+1 > 40$
 $-40 < x+1 \leq -36$
 $-41 < x \leq -37$

3) $-3[-2x-4] - \frac{1}{2} = \frac{5}{2}$
 $-3[-2x-4] = 3$
 $[-2(x+2)] = -1$
 $-1 \leq -2(x+2) < 0$
 $\frac{1}{2} \geq (x+2) > 0$
 $0 < x+2 \leq \frac{1}{2}$

$-2 < x \leq -\frac{1}{2}$

