# section 3.1

to find y-intercept:
set $x=0$ and solve for $y$; coordinate: $(0, \_\_)$

to find x-intercept(s):
set $y=0$ and solve for $x$; coordinate(s): $(\_\_, 0)$

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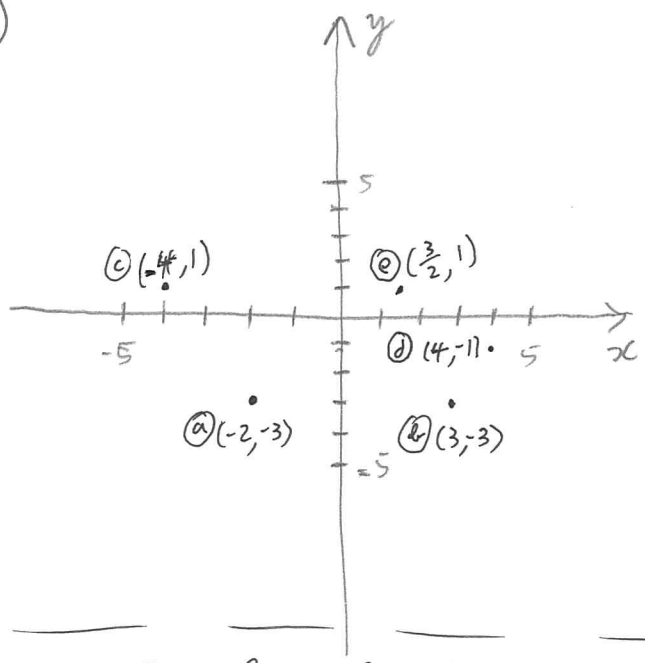
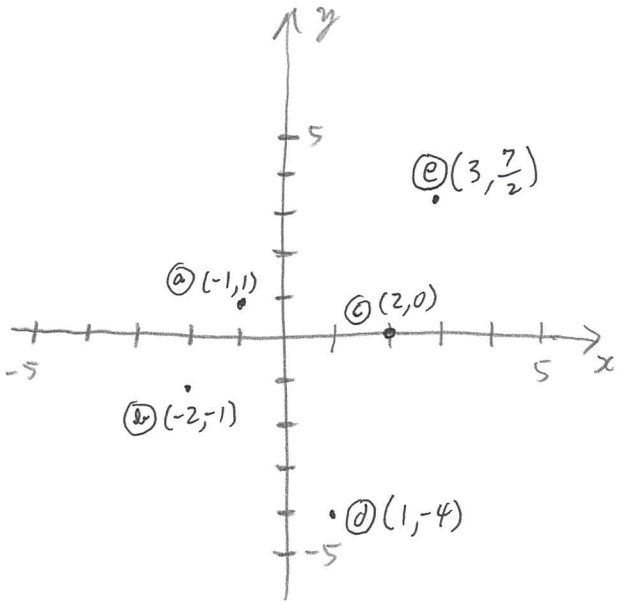
2)




4)




for 5-8, also look at graph in on-line text

6) $y = x - 4$

A: (0, -4)

a) $(-4) = (0) - 4$

$-4 = -4$

yes

b) yes

B: (3, -1)

a) $(-1) = (3) - 4$

$-1 = -1$

yes

b) yes

C: (2, 2)

a) $(2) = (2) - 4$

$2 \neq -2$

no

b) no

D: (1, -5)

a) $(-5) = (1) - 4$

$-5 \neq -3$

no

b) no

8) $y = \frac{1}{3}x + 2$

A: (0, 2)

a) $(2) = \frac{1}{3}(0) + 2$

$2 = 2$

yes

b) yes

B: (3, 3)

a) $(3) = \frac{1}{3}(3) + 2$

$3 = 1 + 2$

$3 = 3$

yes

b) yes

C: (-3, 2)

a) $(2) = \frac{1}{3}(-3) + 2$

$2 = (-1) + 2$

$2 \neq 1$

no

b) no

D: (-6, 0)

a) $(0) = \frac{1}{3}(-6) + 2$

$0 = (-2) + 2$

$0 = 0$

yes

b) yes

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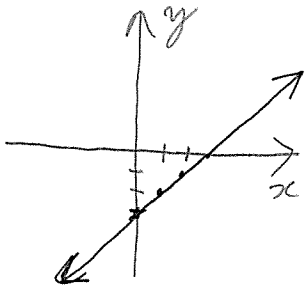
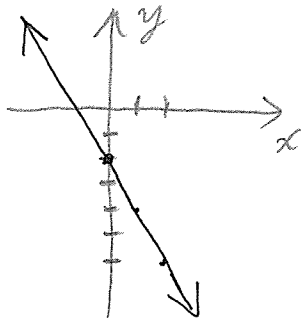
10) $y = x - 3$

| x | y |
|---|---|
| 0 | -3 |
| 1 | -2 |
| 2 | -1 |




12) $y = -2x - 2$

| x | y |
|---|---|
| 0 | -2 |
| 1 | -4 |
| 2 | -6 |

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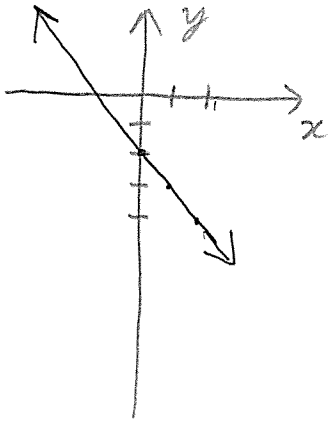
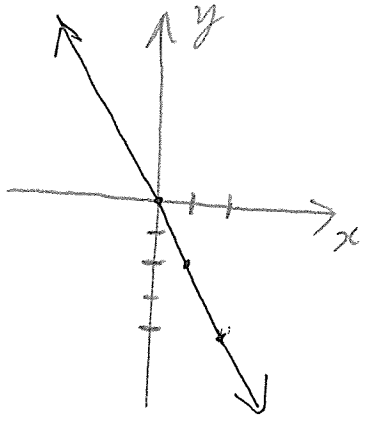
14) $y = -x - 2$

| x | y |
|---|---|
| 0 | -2 |
| 1 | -3 |
| 2 | -4 |



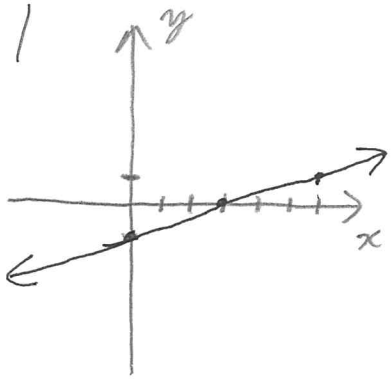

16) $y = -2x$

| x | y |
|---|---|
| 0 | 0 |
| 1 | -2 |
| 2 | -4 |



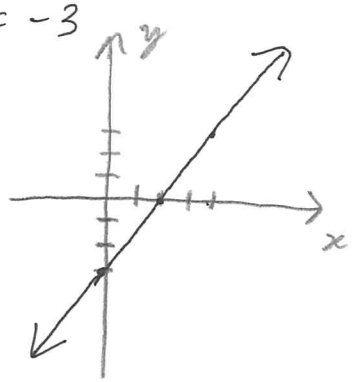
18) $y = \frac{1}{3}x - 1$

| $x$ | $y$ |
|---|---|
| 0 | -1 |
| 3 | 0 |
| 6 | 1 |



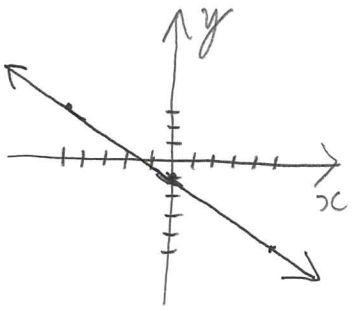

20) $y = \frac{3}{2}x - 3$

| $x$ | $y$ |
|---|---|
| 0 | -3 |
| 2 | 0 |
| 4 | 3 |



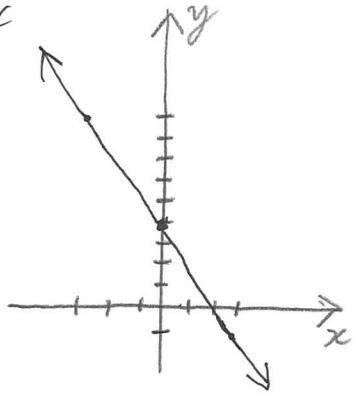

22) $y = \frac{-4}{5}x - 1$

| $x$ | $y$ |
|---|---|
| 0 | -1 |
| 5 | -5 |
| -5 | 3 |

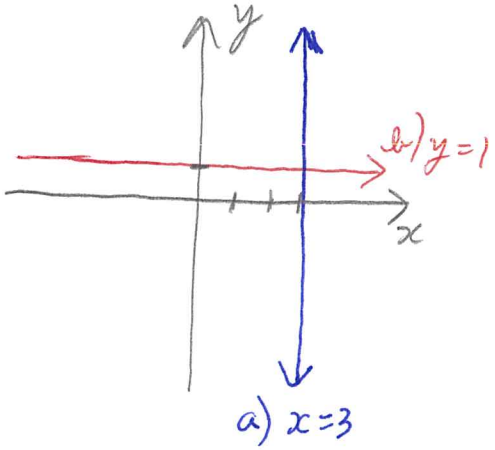



24) $y = \frac{-5}{3}x + 4$

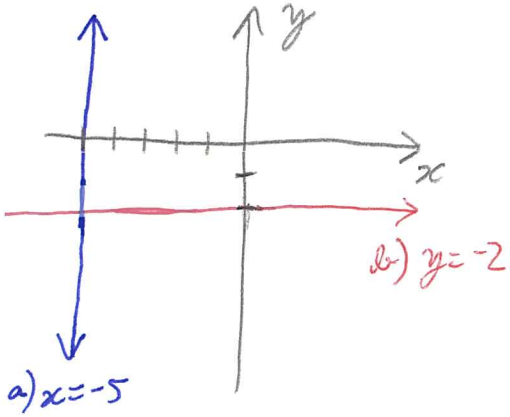
| $x$ | $y$ |
|---|---|
| 0 | 4 |
| 3 | -1 |
| -3 | 9 |



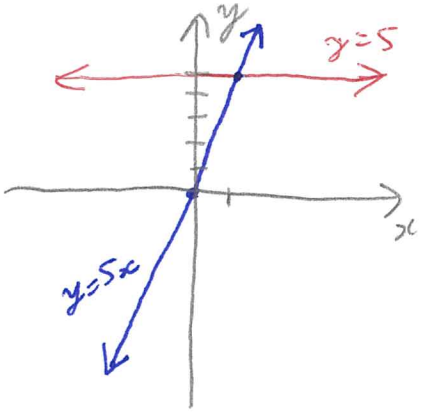

26)



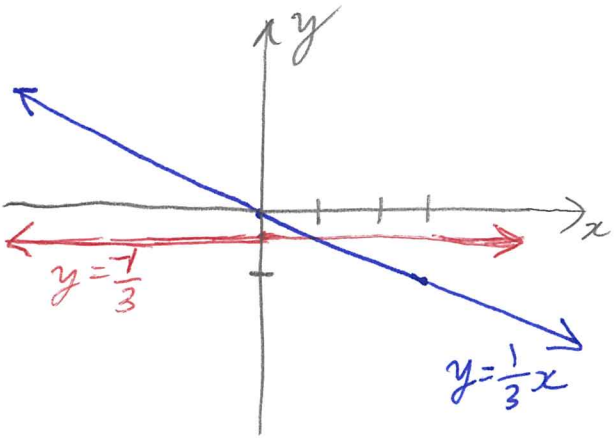

28)




30)




32)



for 33-36, look at graph picture in on-line text

34) y-int: $-2$ $(0,-2)$ x-int: $-2$ $(-2,0)$

36) y-int: $0$ $(0,0)$ x-int: $0$ $(0,0)$

38) $x - y = -4$

y-int: set $x = 0$

$(0) - y = -4$

$-y = -4$

$+4 \quad +y \quad +4 \quad +y$

$4 = y$

$(0,4)$

x-int: set $y = 0$

$x - (0) = -4$

$x = -4$

$(-4,0)$

40) $x - 2y = 8$

y-int: set $x = 0$

$(0) - 2y = 8$

$-2y = 8$

$-8 \quad +2y \quad -8 \quad +2y$

$\frac{-8}{2} = \frac{2y}{2}$

$-4 = y$

$(0,-4)$

x-int: set $y = 0$

$x - 2(0) = 8$

$x = 8$

$(8,0)$

42) $5x - y = 5$

y-int: set $x = 0$

$5(0) - y = 5$

$-y = 5$

$-5 + y \quad -5 + y$

$-5 = y$

$(0, -5)$

x-int: set $y = 0$

$5x - (0) = 5$

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

$x = 1$

$(1, 0)$

---

44) $3x - 2y = 12$

y-int; set $x = 0$

$3(0) - 2y = 12$

$-2y = 12$

$-12 + 2y \quad -12 + 2y$

$\frac{-12}{2} = \frac{2y}{2}$

$-6 = y$

$(0, -6)$

x-int; set $y = 0$

$3x - 2(0) = 12$

$\frac{3x}{3} = \frac{12}{3}$

$x = 4$

$(4, 0)$

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46) $x + 2y = 4$

y-int: set $x = 0$

$(0) + 2y = 4$

$\frac{2y}{2} = \frac{4}{2}$

$y = 2$

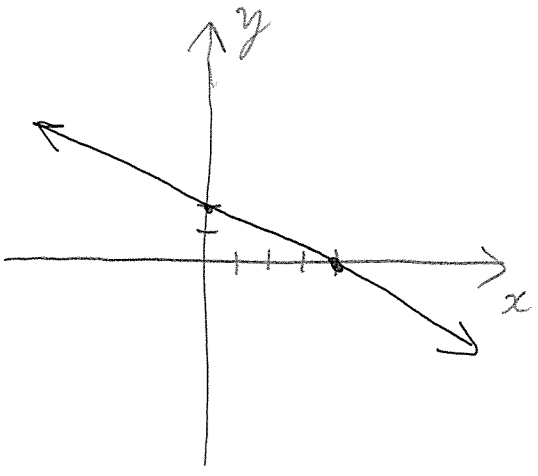
$(0, 2)$

x-int; set $y = 0$

$x + 2(0) = 4$

$x = 4$

$(4, 0)$



48) $x - y = -4$

y-int: set $x = 0$

$(0) - y = -4$

$-y = -4$

$+4 \quad +y \quad +4 \quad +y$

$4 = y$

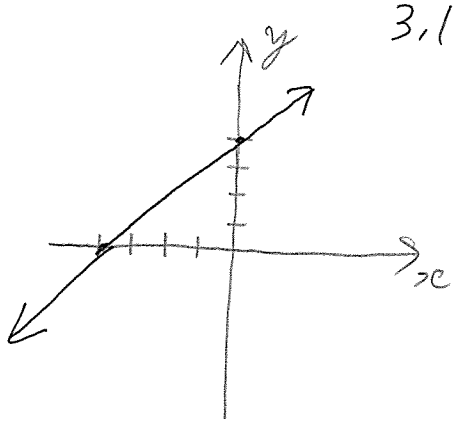
$(0, 4)$

x-int: set $y = 0$

$x - (0) = -4$

$x = -4$

$(-4, 0)$

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50) $3x + y = 3$

y-int: set $x = 0$

$3(0) + y = 3$

$y = 3$

$(0, 3)$

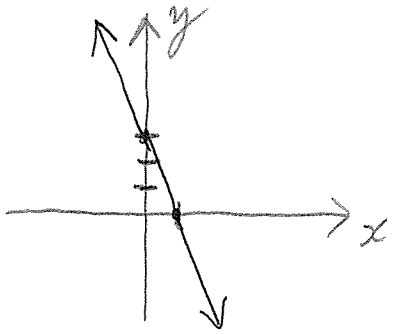
x-int: set $y = 0$

$3x + (0) = 3$

$\frac{3x}{3} = \frac{3}{3}$

$x = 1$

$(1, 0)$

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52) $2x - y = -8$

y-int: set $x = 0$

$2(0) - y = -8$

$-y = -8$

$+8 \quad +y \quad +8 \quad +y$

$8 = y$

$(0, 8)$

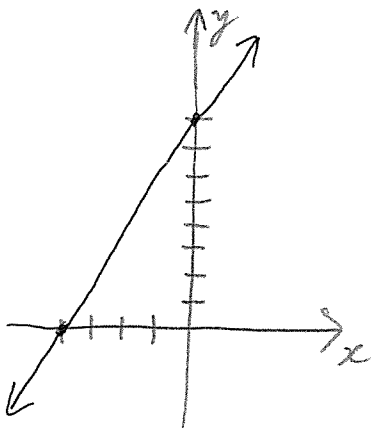
x-int: set $y = 0$

$2x - (0) = -8$

$\frac{2x}{2} = \frac{-8}{2}$

$x = -4$

$(-4, 0)$

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54) $3x - 2y = 6$

y-int: set $x = 0$

$3(0) - 2y = 6$

$-2y = 6$

$-6 \quad +2y \quad -6 \quad +2y$

$\frac{-6}{2} = \frac{2y}{2}$

$-3 = y \quad (0, -3)$

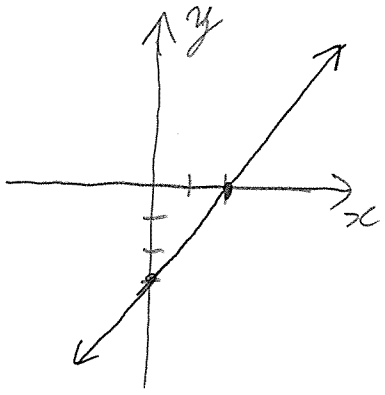
x-int: set $y = 0$

$3x - 2(0) = 6$

$\frac{3x}{3} = \frac{6}{3}$

$x = 2$

$(2, 0)$



56) $3x - 4y = -12$

y-int: set $x = 0$

$3(0) - 4y = -12$

$-4y = -12$

$+12 \quad +4y \quad +12 \quad +4y$

$\frac{12 = 4y}{4 \quad 4}$

$3 = y$

$(0, 3)$

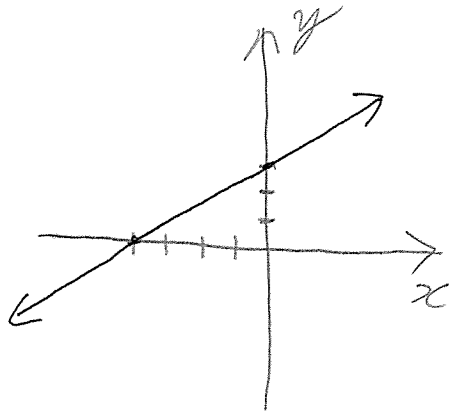
x-int: set $y = 0$

$3x - 4(0) = -12$

$\frac{3x}{3} = \frac{-12}{3}$

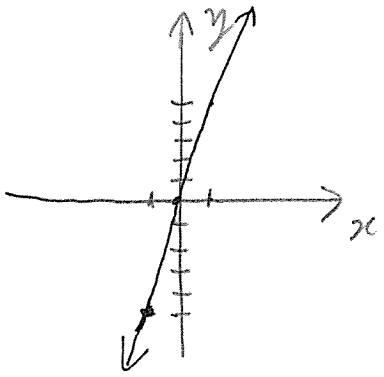
$x = -4$

$(-4, 0)$



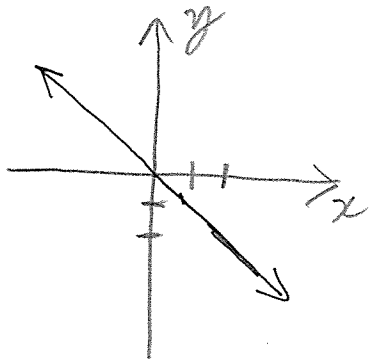

58) $y = 5x$

| x | y |
|---|---|
| 0 | 0 |
| 1 | 5 |
| -1 | -5 |



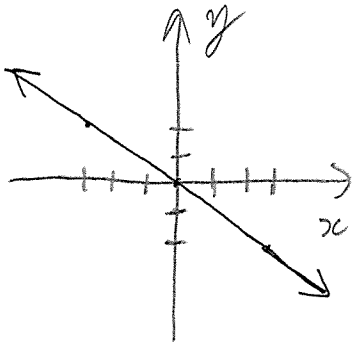

60) $y = -x$

| x | y |
|---|---|
| 0 | 0 |
| 1 | -1 |
| 2 | -2 |



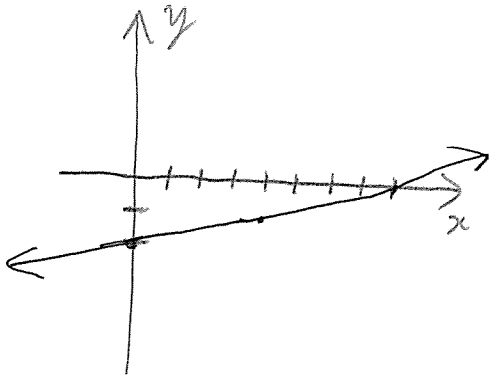

62) $y = \frac{-2}{3}x$

| x | y |
|---|---|
| 0 | 0 |
| 3 | -2 |
| -3 | 2 |




64) $y = \frac{1}{4}x - 2$

| x | y |
|---|---|
| 0 | -2 |
| 4 | -1 |
| 8 | 0 |




66) $5x + 2y = 10$

y-int: set $x = 0$

$5(0) + 2y = 10$

$\frac{2y = 10}{2 \quad 2}$

$y = 5$

$(0, 5)$

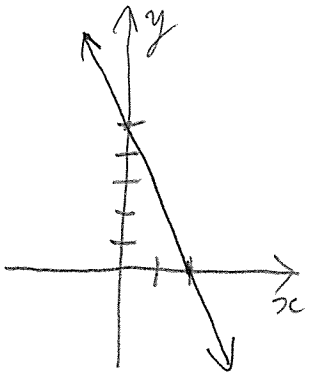
x-int: set $y = 0$

$5x + 2(0) = 10$

$\frac{5x = 10}{5 \quad 5}$

$x = 2$

$(2, 0)$




68) $x = 3$