Pg. 324-325 9, 11, 15, 21, 23, 31, 35, 55, 57, 59, 60, 61

9. $x - 2y = 2$

$0 - 2y = 2$

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

$\boxed{y = -1}$

$(0, -1)$

$x - 2(0) = 2$

$\boxed{x = 2}$

$(2, 0)$

11) $3x - 5y = -20$

$3(0) - 5y = -20$

$\frac{-5y}{-5} = \frac{-20}{-5}$

$y = 4$

$(0, 4)$

$3x - 5(0) = -20$

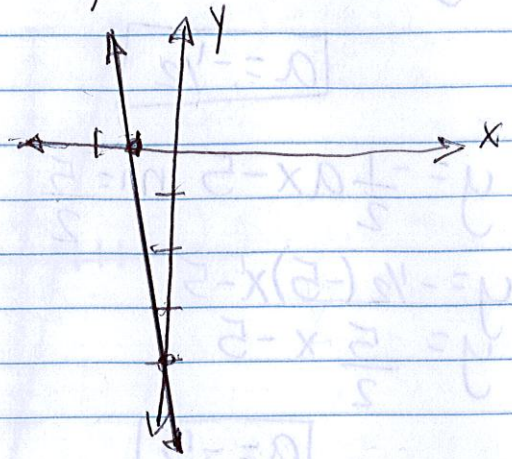
$\frac{3x}{3} = \frac{-20}{3}$

$x = -20/3$

$(-20/3, 0)$

15. x intercept -1

y intercept -4



21. $-4x + y = -12$

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

$y = -12$

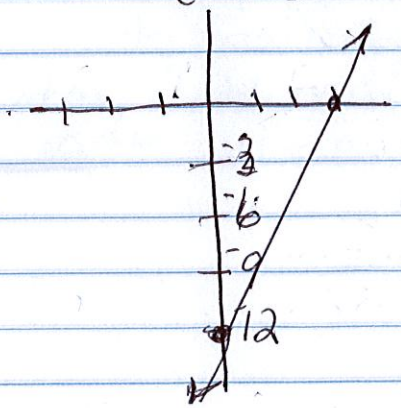
$(0, -12)$

$-4x + 0 = -12$

$\frac{-4x}{-4} = \frac{-12}{-4}$

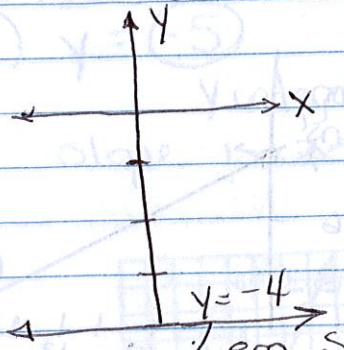
$x = 3$

$(3, 0)$



23. $y = -4$

horizontal



31. $y = 2x + 5$

$-5 \quad -5$

$-5 + y = 2x$

$-y \quad -y$

$\boxed{-5 = 2x - y}$

$\boxed{2x - y = -5}$

35. $y = -\frac{2}{3}x - 1$

$+\frac{2}{3}x \quad +\frac{2}{3}x$

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

$3 \cdot \frac{2}{3}x + 3y = -1 \cdot 3$

$\boxed{2x + 3y = -3}$

55. $(-5, -5)(4, -2)$

① find slope

$m = \frac{y_2 - y_1}{x_2 - x_1} \quad \frac{-2-(-5)}{4-(-5}$

$= \frac{-2+5}{4+5} = \frac{3}{9} = \frac{1}{3}$

② find b.

$y = mx + b$

$-2 = \frac{1}{3} \cdot 4 + b$

$-2 = \frac{4}{3} + b$

$-\frac{2}{3} - \frac{4}{3} \quad -\frac{4}{3} + b$

$-\frac{10}{3} = b$

$\boxed{y \text{ intercept} = -10/3}$ $\boxed{0, -10/3}$

$y = \frac{1}{3}x + -10/3$

$+\frac{10}{3} \quad +10/3$

$\frac{10}{3} + y = \frac{1}{3}x$

$-y = -y$

$3 \cdot \frac{10}{3} = 3 \cdot \frac{1}{3}x - y \cdot 3$

$10 = x - 3y$

$10 = x - 3(0)$

$\boxed{10 = x}$ $(10, 0)$

x_1, y_1, x_2, y_2

57. $(-2, 8)(4, 2)$

find slope

$\frac{y_2 - y_1}{x_2 - x_1} = \frac{2-8}{4-(-2)} \quad \frac{-6}{6} = -1$

$y = mx + b$

$2 = (-1)4 + b$

$2 = -4 + b$

$+4 \quad +4$

$\boxed{6 = b} \quad (0, 6)$

$y = mx + b$

$0 = -1x + 6$

$-6 = \quad -6$

$\frac{-6}{-1} = \frac{-x}{-1}$

$\boxed{6 = x} \quad (6, 0)$

59. $(5, 0.4)(-1, -2)$

$\frac{y_2 - y_1}{x_2 - x_1} = \frac{-2 - 0.4}{-1 - 5} \quad \frac{-2.4}{-6}$

$= .4$

$y = mx + b$

$-2 = .4(-1) + b$

$-2 = -.4 + b$

$\boxed{-1.6 \quad b} \quad (0, -1.6)$

$y = mx + b$

$0 = +.4x + -1.6$

$1.6 = +.4x$

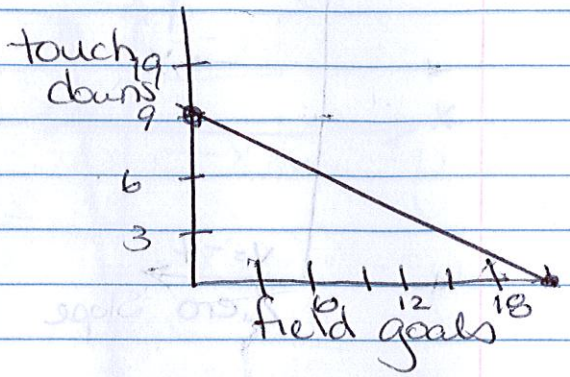
$+ \quad .4 \quad .4$

$\boxed{4 = x} \quad (4, 0)$

60. $3f + 7t = 63$

f = field goals

t = touch downs



Solve for x's

y intercept

$3(0) + 7t = 63$

$\frac{7t}{7} = \frac{63}{7}$

$t = 9$

$3x + 7(0) = 63$

$\frac{3x}{3} = \frac{63}{3}$

$x = 21$

21 field goals & 0 touch downs

14 field goals & 3 touch down

7 field goal and 6 touch downs

0 field goals and 9 touch downs