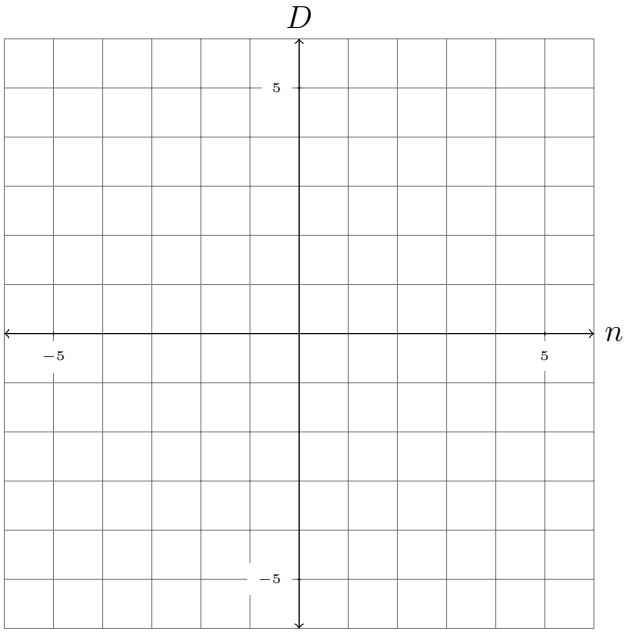
Accelerated 60-95 HW 10 (B 4.1) Graphing Linear Equations 1 Name:

Taken from § 4.1 in Blitzer.

In exercises 1 - 7 odd, plot the given point in a rectangular coordinate system. Label your points. Indicate in which quadrant each point lies.

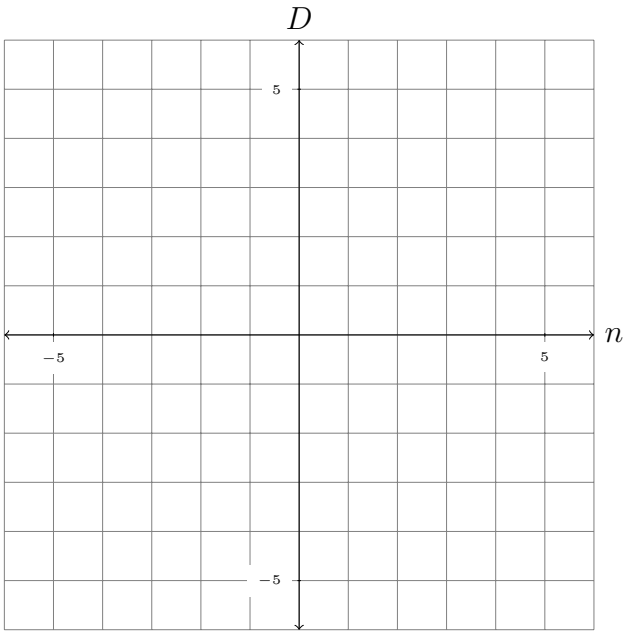
1) (3,5) 3) (-5,1) 5) (-3, -1) 7) (6,-3.5)



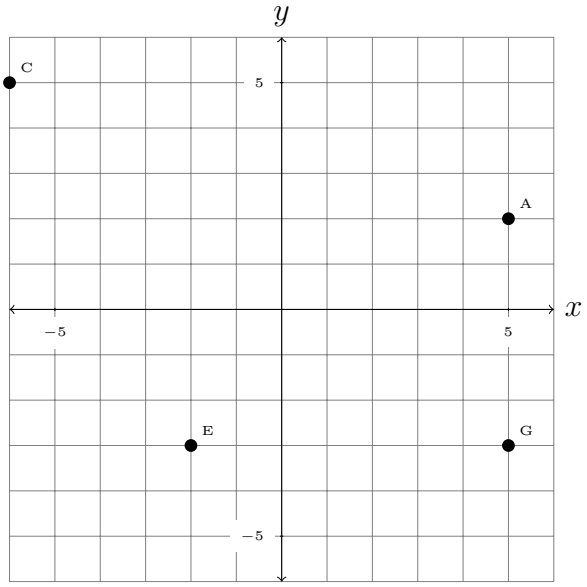
In exercises 9 - 23 odd, plot the given point in a rectangular coordinate system. Label your points.

9) (-3,-3) 11) (-2,0) 13) (0, 2) 15) (0,-3)

17) $(\frac{5}{2}, \frac{7}{2})$ 19) $(-5, \frac{3}{2})$ 21) (0,0) 23) $(0, -\frac{5}{2})$



In exercises 25 - 31 odd, give the ordered pairs that correspond to the points labeled in the figure.



25) A 27) C 29) E 31) G

In exercises 37 - 47 odd, determine whether each ordered pair is a solution of the given equation.

37) $y = 3x$ (2,3), (3,2), (-4, -12)

39) $y = -4x$ (-5, -20), (0,0), (9, -36)

41) $y = 2x + 6$ (0,6), (-3,0), (2,-2)

43) $3x + 5y = 15$ (-5,6), (0,5), (10,-3)

45) $x + 3y = 0$ (0,0), $(1, \frac{1}{3})$, $(2, -\frac{2}{3})$

47) $x - 4 = 0$ (4,7), (3,4), (0,-4)

In exercises 49 - 55, find five solutions of each equation. Select integers for x starting with -2 and ending with 2. Organize your work in a table of values.

49) $y = 12x$

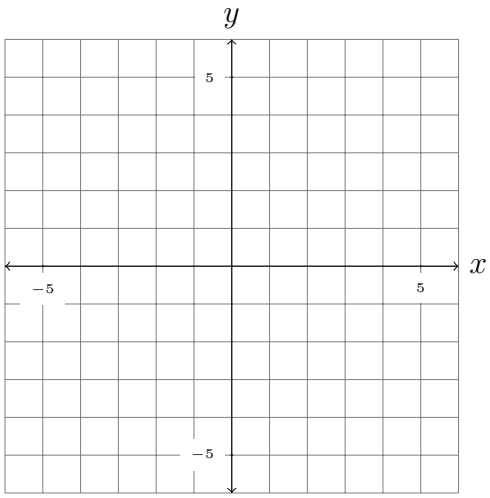
51) $y = -10x$

53) $y = 8x - 5$

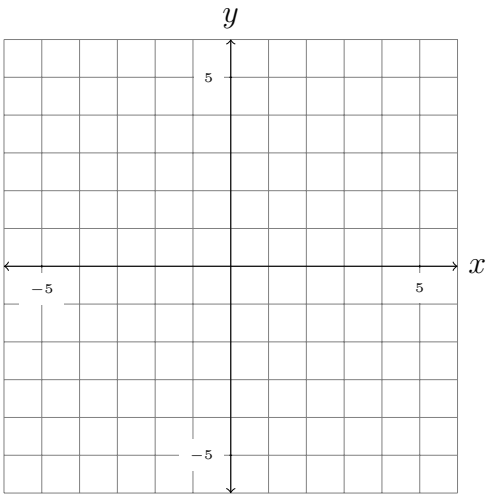
55) $y = -3x + 7$

In exercises 57 - 79 odd, graph each linear equation in two variables. Find at least five solutions in your table of values for each equation.

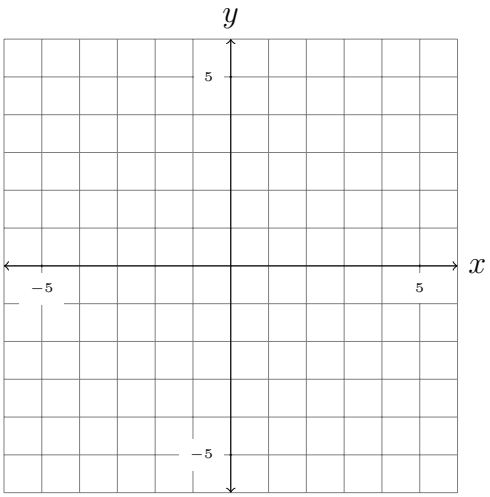
57) $y = x$



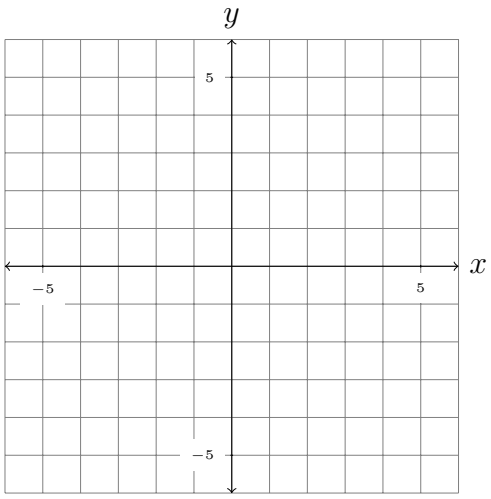
59) $y = x - 1$



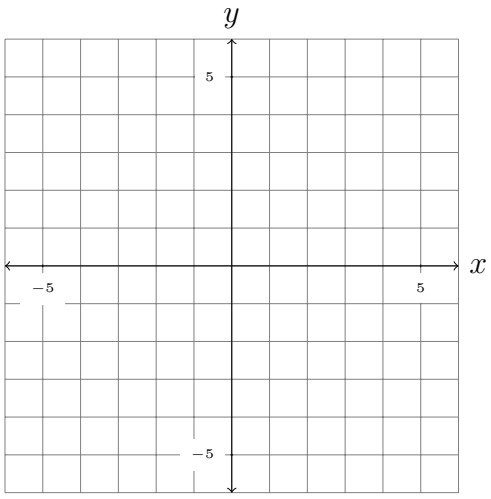
61) $y = 2x + 1$



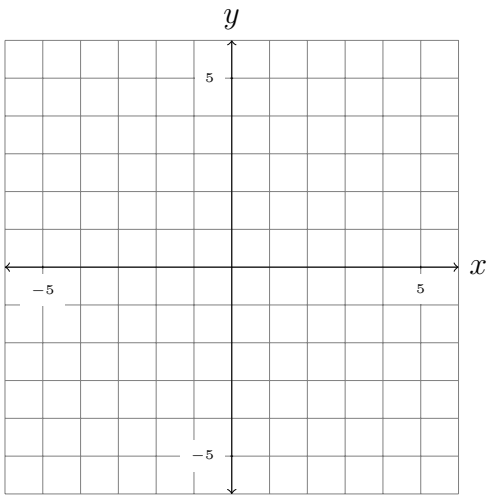
63) $y = -x + 2$



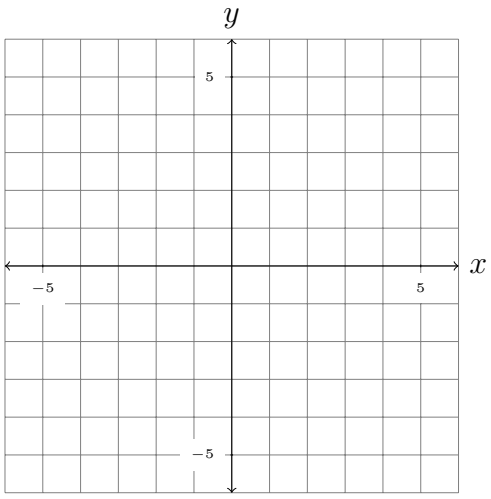
65) $y = -3x - 1$



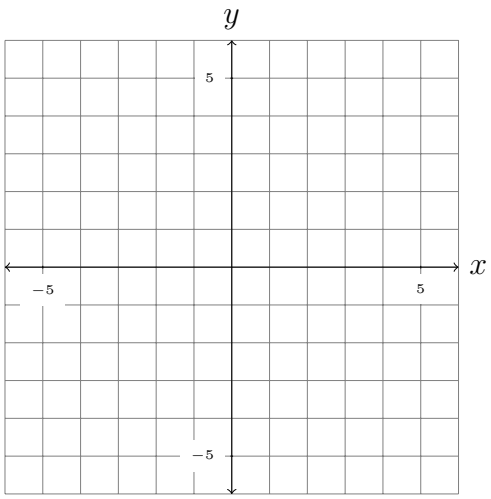
67) $y = \frac{1}{2}x$



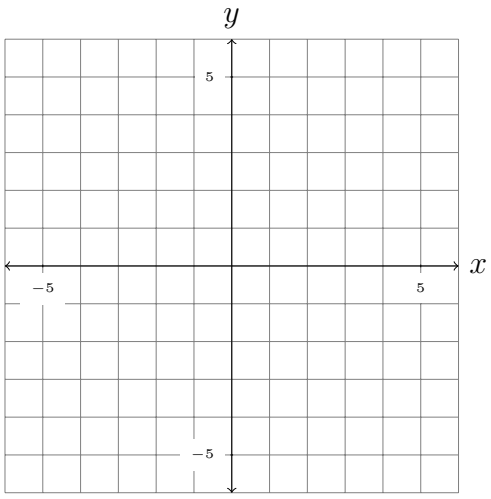
69) $y = -\frac{1}{4}x$



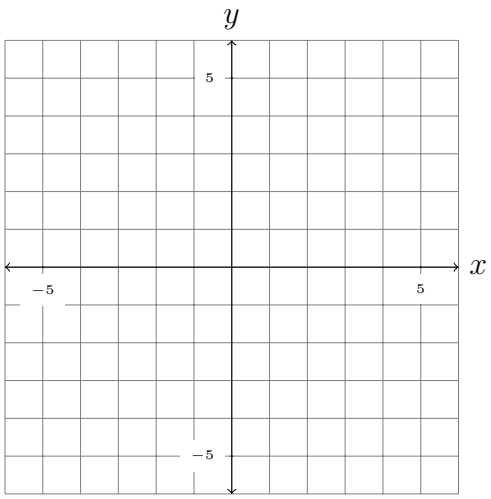
71) $y = \frac{1}{3}x + 1$



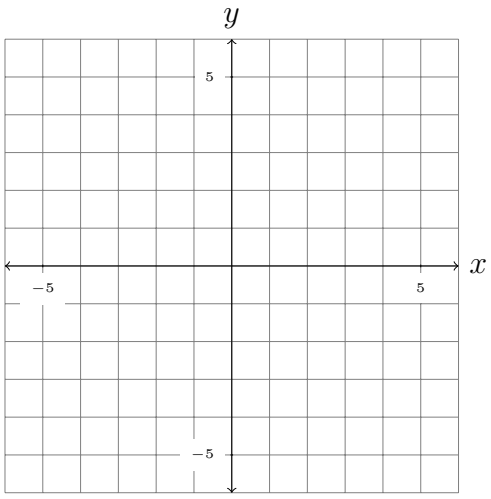
73) $y = -\frac{3}{2}x + 1$



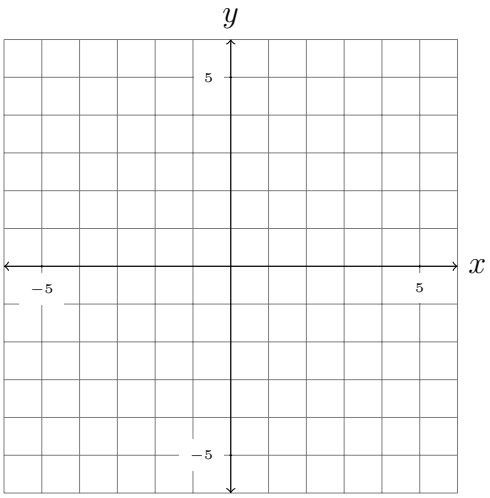
75) $y = -\frac{5}{2}x - 1$



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



79) $y = 4$ or $y = 0x + 4$



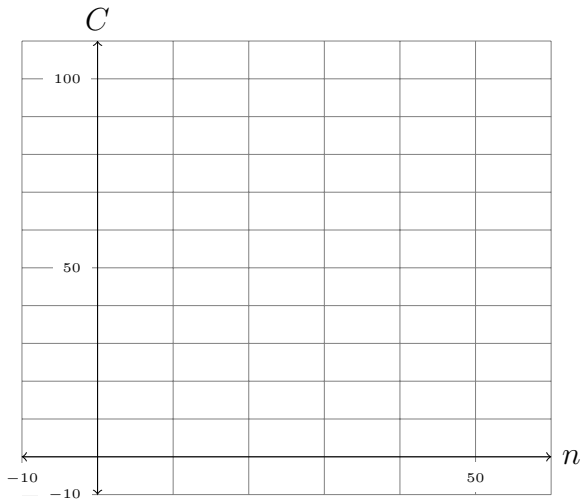
The graph at the top right of page 235 shows the average number of pounds of chicken and fish that each American consumed in 1960 and 2005. Exercise 93 involves models, graphs of models and projections based on the data. When solving these problems, you will need to estimate the value on the vertical axis that corresponds to a particular point on a graph.

93) The graph shows that in 1960, per capita chicken consumption was 28 pounds. This increased by approximately 1.3 pounds per year from 1960 through 2005. These conditions can be described by the mathematical model

$$C = 1.3n + 28$$

where C is per capita chicken consumption n years after 1960.

a. and b. Let $n = 0$, 10, 20, 30 and 40. Use these values for n to make a table of values showing five solutions to the equation. Use this data to graph the formula in the given rectangular coordinate system. Notice the units of each tick mark for both the horizontal and vertical scales.



b2. (not in book) Why did I have the tick marks labeled the way they are?

c. Use the graph to estimate per capita chicken consumption in 2015.

d. Use the formula to project per capita chicken consumption in 2015.