Worksheet 1

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38. Which graph in Figure 1.13 best matches each of the following stories?[3] Write a story for the remaining graph.

    (a) I had just left home when I realized I had forgotten my books, and so I went back to pick them up.

    (b) Things went fine until I had a flat tire.

    (c) I started out calmly but sped up when I realized I was going to be late.
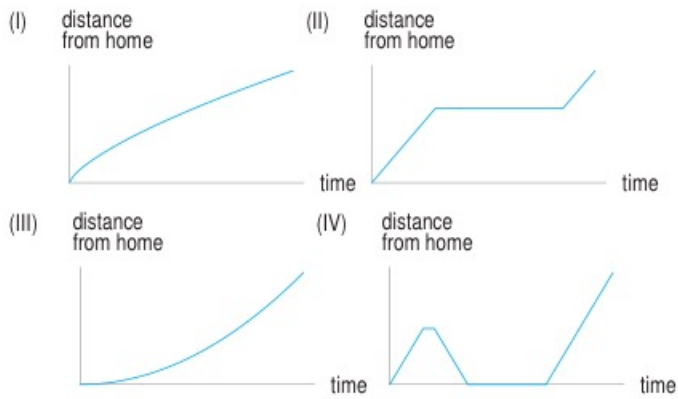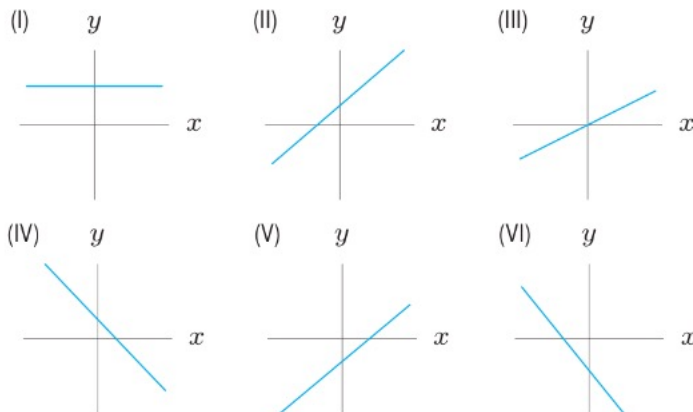

Figure 1.13

41. In a California town, the monthly charge for waste collection is $8 for 32 gallons of waste and $12.32 for 68 gallons of waste.

    (a) Find a linear formula for the cost, C, of waste collection as a function of the number of gallons of waste, w.

    (b) What is the slope of the line found in part (a)? Give units and interpret your answer in terms of the cost of waste collection.

    (c) What is the vertical intercept of the line found in part (a)? Give units and interpret your answer in terms of the cost of waste collection.
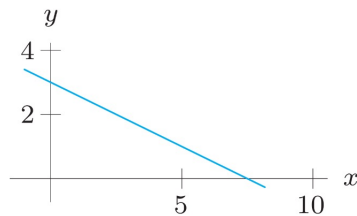
12. Match the graphs in Figure 1.9 with the following equations. (Note that the x and y scales may be unequal.)

    (a) $y = x - 5$ **(b)** $-3x + 4 = y$

    (c) $5 = y$ **(d)** $y = -4x - 5$

    (e) $y = x + 6$ **(f)** $y = x/2$

Figure 1.9

14. Estimate the slope and the equation of the line in Figure 1.11.

Figure 1.11

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42. For tax purposes, you may have to report the value of your assets, such as cars or refrigerators. The value you report drops with time. "Straight-line depreciation" assumes that the value is a linear function of time. If a $950 refrigerator depreciates completely in seven years, find a formula for its value as a function of time.