Use intercepts to graph the line described by each equation.

24. $4x - 6y = 12$ **25.** $2x + 3y = 18$ **26.** $\frac{1}{2}x - 4y = 4$

27. $y - x = -1$ **28.** $5x + 3y = 15$ **29.** $x - 3y = -1$

LINK

Biology

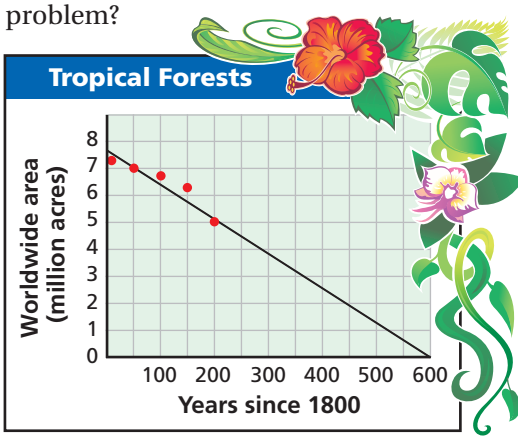
Bamboo is the world's fastest-growing woody plant. Some varieties can grow more than 30 centimeters a day and up to 40 meters tall.

30. Biology A bamboo plant is growing 1 foot per day. When you first measure it, it is 4 feet tall.

- **a.** Write an equation to describe the height y, in feet, of the bamboo plant x days after you measure it.
- **b.** What is the y-intercept?
- **c.** What is the meaning of the y-intercept in this problem?

31. Estimation Look at the scatter plot and trend line.

- **a.** Estimate the x- and y-intercepts.
- **b.** What is the real-world meaning of each intercept?



32. Personal Finance A bank employee notices an abandoned checking account with a balance of \$412. If the bank charges a \$4 monthly fee for the account, the function $b = 412 - 4m$ shows the balance b in the account after m months.

- **a.** Graph the function and give its domain and range. (*Hint:* The bank will keep charging the monthly fee even after the account is empty.)
- **b.** Find the intercepts. What does each intercept represent?
- **c.** When will the bank account balance be 0?

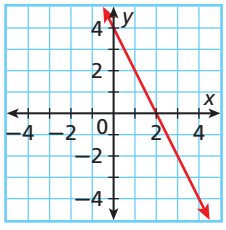
H.O.T. **33. Critical Thinking** Complete the following to learn about intercepts and horizontal and vertical lines.

- **a.** Graph $x = -6$, $x = 1$, and $x = 5$. Find the intercepts.
- **b.** Graph $y = -3$, $y = 2$, and $y = 7$. Find the intercepts.
- **c.** Write a rule describing the intercepts of linear equations whose graphs are horizontal and vertical lines.

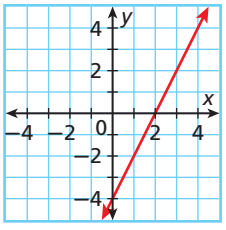
Match each equation with a graph.

34. $-2x - y = 4$ **35.** $y = 4 - 2x$ **36.** $2y + 4x = 8$ **37.** $4x - 2y = 8$

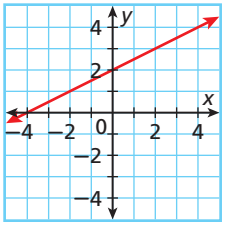
A.



B.



C.



D.