

**Write an equation of the line with the given slope and y-intercept.**

- 1) Slope: 2, y-intercept:  $-6$
- 2) Slope: 3, y-intercept:  $-5$
- 3) Slope:  $\frac{1}{2}$ , y-intercept: 3
- 4) Slope:  $-\frac{3}{5}$ , y-intercept: 0
- 5) Slope:  $-1$ , y-intercept: 10
- 6) Slope: 0.5, y-intercept: 7.5

**Write a linear equation in slope-intercept form to model each situation.**

- 7) You rent a bicycle for \$20 plus \$2 per hour.
- 8) An auto repair shop charges \$50 plus \$25 per hour.
- 9) A candle is 6 inches tall and burns at a rate of  $\frac{1}{2}$  inch per hour.
- 10) The temperature is  $15^\circ$  and is expected to fall  $2^\circ$  each hour during the night.
- 11) A Norfolk pine is 18 inches tall and grows at a rate of 1.5 feet per year.
- 12) A Cairn terrier weighs 30 pounds and is on a special diet to lost 2 pounds per month.
- 13) An airplane at an altitude of 3000 feet descends at a rate of 500 feet per mile.
- 14) A book subscription charges \$10 for a sign-up fee and \$2 per book.