

Section 1.1 Practice Master

- Translate each phrase into an algebraic expression.
 - six more than three times a number
 - five less than one third a value
 - a number increased by four, times another number
 - a value decreased by the fraction one quarter
- Translate each phrase into an algebraic expression.
 - three times a length
 - fifteen percent of an area
 - half a distance
 - eleven percent of a mass
- Translate each sentence into an algebraic equation.
 - Three times a value, decreased by four, is two.
 - One third a number, increased by two, is one.
 - One number is five times larger than two more than a second number.
 - The price of a meal, including fourteen percent tax, is ninety-five dollars and seventy-six cents.
- Translate each sentence into an algebraic equation.
 - At a school concert, 355 tickets were sold. There were 51 more student tickets sold than adult tickets.
 - A rectangle has a perimeter of 172 cm. The length of the rectangle is 23 cm longer than twice the width.
 - The sum of two times the smaller of two consecutive numbers and three times the larger number is 113.
 - Enrico weighs 7 kg more than Julian. The sum of their masses is 183 kg.
- Find the point of intersection for each pair of lines. Check your answers.
 - $y = 3x + 10$
 $y = 4x + 7$
 - $y = x + 3$
 $y = 1 - x$
 - $y = x - 1$
 $y = 9 - x$
 - $y = 1 - 2x$
 $y = x - 5$
- Find the point of intersection for each pair of lines. Check your answers.
 - $x - y = 4$
 $3x + y = 24$
 - $x + y = 4$
 $2x + 3y = 9$
 - $3x - 3y = -3$
 $2x + y = 4$
 - $5x - 2y = 10$
 $x + 2y = 2$
- Use Technology** Use a graphing calculator or *The Geometer's Sketchpad*® to find the point of intersection for each pair of lines. Where necessary, round answers to the nearest hundredth.
 - $2x + 5y = -20$
 $5x - 3y = -15$
 - $2x + 3y - 7 = 0$
 $3x - 5y - 13 = 0$
 - $3x + 2y = 3$
 $2x + 10y = -5$
 - $y = -0.5x - 1$
 $y = 0.25x + 1$
- Charlene is looking into cell phone plans. Cell Plus gives unlimited minutes for \$50/month. A1 Cell offers a \$40 monthly fee, plus 5¢/min for any time over 300 min per month.
 - Write a linear equation to represent the charges for each company.
 - Graph the two equations to find the point of intersection.
 - What does the point of intersection represent?
 - Which plan should Charlene choose if she estimates that she will use her phone 10 h per month? 6 h per month?