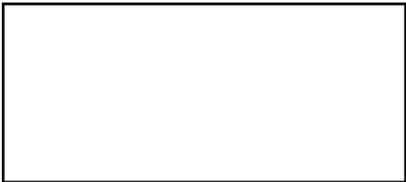


Section 6.2 Practice Master

- Solve for x .
 - $(x + 6)(x + 1) = 0$
 - $(x - 4)(x + 7) = 0$
 - $x(x - 9) = 0$
 - $(3x + 1)(2x - 1) = 0$
 - $(5x + 6)(4x + 3) = 0$
 - $(3x - 1)(10x - 3) = 0$
- Solve and check.
 - $x^2 + 4x - 21 = 0$
 - $-x^2 + 5x + 6 = 0$
 - $6x^2 + x - 1 = 0$
 - $5x^2 - 19x - 4 = 0$
 - $3x^2 + 2x = 0$
 - $9x^2 - 16 = 0$
- Solve.
 - $x^2 + 5x = -4$
 - $9c^2 = 49$
 - $4a^2 + 12a = -9$
 - $6x = 3x^2$
 - $2x^2 + 5 = -11x$
 - $-2x^2 - 5x = 2$
- A rectangle has dimensions $x + 11$ and $2x + 5$, both measured in centimetres. Determine the value of x so that the area is 117 cm^2 .
- The area of the rectangle shown in the diagram is 36 cm^2 . What are its dimensions?

x

- Write a quadratic equation in factored form, using integers, for each situation.
 - The roots of the equation are 3 and -4 .
 - The roots of the equation are $\frac{1}{2}$ and -5 .
- Write a quadratic equation in the form $x^2 + bx + c = 0$ with roots 2 and -4 .
- Write a quadratic equation in the form $ax^2 + bx + c = 0$, where a , b , and c are integers and the roots are $\frac{1}{5}$ and $-\frac{2}{3}$.
- A picture that measures 10 cm by 5 cm is to be surrounded by a mat. The mat is to be the same width on all sides of the picture. The area of the mat is to be twice the area of the picture. What is the width of the mat?
- A regular polygon with n sides has $\frac{n(n-3)}{2}$ diagonals. Find the number of sides of a regular polygon that has 44 diagonals.
- Solve.
 - $x^2 + \frac{9x}{2} - \frac{5}{2} = 0$
 - $\frac{x^2}{4} - x - 3 = 0$
 - $\frac{x^2}{6} + 2x + \frac{10}{3} = 0$
 - $\frac{x^2}{9} - \frac{x}{3} = 2$
 - $\frac{x^2}{2} + \frac{7x}{4} = 0$
 - $\frac{x^2}{4} - \frac{x}{3} = \frac{1}{3}$
- Solve.
 - $\frac{z^2 - 1}{5} = 7$
 - $2 = \frac{4 + x^2}{10}$
 - $\frac{3y^2 + 7}{2} = 5$
 - $\frac{1 - 5n^2}{4} = -31$