1. Solve the equation.

5x-33 = 2(x-3)

1. $\frac{2}{y}+\frac{7}{y}-\frac{5}{y}=2$
2. At 8 A.M. a snowplow, traveling at a constant speed, begins to clear a highway leading out of town. At 10 A.M. an automobile begins traveling the highway at a speed of 45 mi/hr and reaches the plow 30 minutes later. Find the speed of the snowplow.
3. A boy can row a boat at a constant rate of 4 mi/hr in still water. He rows upstream for 12 minutes and then rows downstream, returning to his starting point in another 10 minutes. Find the rate of the current.
4. A stained glass window is being designed in the shape of a rectangle surmounted by a semicircle. The width of the window is to be 3 feet, but the height *h* is yet to be determined. If 15 ft2 of glass is to be used, find the height, *h*.
5. Solve the equation.

$\frac{x}{x-2}+ \frac{10}{x+2}=\frac{8}{x^{2}-4}$

1. A rectangular plot of ground having dimensions 38 feet by 34 feet is surrounded by a walk of uniform width. If the total area of the walk & plot is 2300 ft2, what is its width?
2. Write the expression i(5+2i)2 in the form of a+bi.
3. Write the expression (5-7i)(5+7i) in the form of a+bi.
4. Write the expression $\frac{-4+6i}{2+3i}$ in the form of a+bi.
5. Write the expression (5+2i)3 in the form of a+bi.
6. Write the expression $\frac{\sqrt{-4}}{\sqrt{-169} \sqrt{-361}} $in the form of a+bi.
7. Find the solutions of the equation.

x2 – 4x + 29 = 0.

1. Find the solutions of the equation.

x4 = 81.

1. Solve the equation.

4|9x+27| - 322 = 2.

1. Solve the inequality. 17. Solve the inequality.

 4 ≥ 7x+8 > -3 2 ≤ $4-\frac{1}{7}x$ < 4

1. Solve the inequality. 19. Solve the inequality.

 |7x+1| < 7 -3x2 < -21x + 30.