

## Assignment:

In Exercises 35 and 36, the table permits you to estimate a zero of an expression. State the expression and give the zero as accurately as can be read from the table.

35.

X	$Y_1$	
.4	-.04	
.41	-.0119	
.42	.0164	
.43	.0449	
.44	.0736	
.45	.1025	
.46	.1316	
$Y_1 = X^2 + 2X - 1$		

36.

X	$Y_1$	
-1.735	-.0177	
-1.734	-.0117	
-1.733	-.0057	
-1.732	3E-4	
-1.731	.0063	
-1.73	.01228	
-1.729	.01826	
$Y_1 = X^3 - 3X$		

In Exercises 37 and 38, use tables to find the indicated number of solutions of the equation accurate to two decimal places.

**37.** Two solutions of  $x^2 - x - 1 = 0$

**38.** One solution of  $-x^3 + x + 1 = 0$

In Exercises 39–44, solve the equation graphically by finding intersections. Confirm your answer algebraically.

**39.**  $|t - 8| = 2$

**40.**  $|x + 1| = 4$

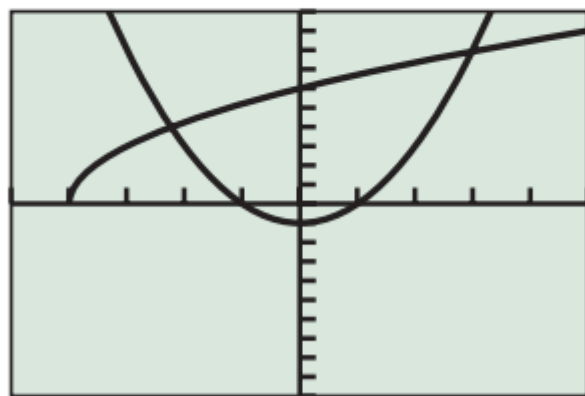
**41.**  $|2x + 5| = 7$

**42.**  $|3 - 5x| = 4$

**43.**  $|2x - 3| = x^2$

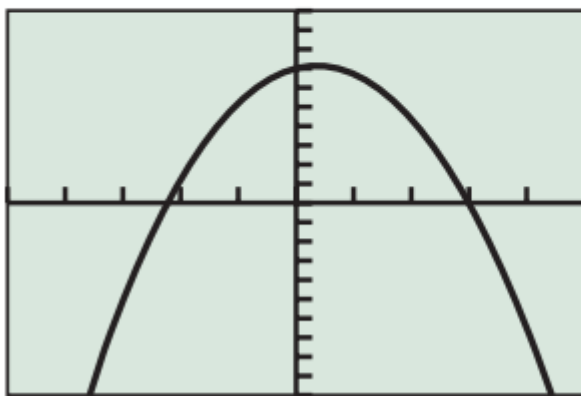
**44.**  $|x + 1| = 2x - 3$

- 45. Interpreting Graphs** The graphs in the two viewing windows shown here can be used to solve the equation  $3\sqrt{x+4} = x^2 - 1$  graphically.



$[-5, 5]$  by  $[-10, 10]$

(a)



$[-5, 5]$  by  $[-10, 10]$

(b)

- (a)** The viewing window in (a) illustrates the intersection method for solving. Identify the two equations that are graphed.
- (b)** The viewing window in (b) illustrates the  $x$ -intercept method for solving. Identify the equation that is graphed.
- (c) Writing to Learn** How are the intersection points in (a) related to the  $x$ -intercepts in (b)?

In Exercises 47–56, use a method of your choice to solve the equation.

**48.**  $x^2 - 3x = 12 - 3(x - 2)$

**50.**  $x + 2 - 2\sqrt{x + 3} = 0$

**51.**  $x^3 + 4x^2 - 3x - 2 = 0$

**54.**  $|x + 5| = |x - 3|$