

Graphing Calculator Activity Keystrokes

For use with Example 3 on page 528.

Keystrokes for Exercise 51**TI-82**Y= 0.000112 X,T,θ x² - 492

ENTER

WINDOW ENTER

-3000 ENTER

3000 ENTER

500 ENTER

-1500 ENTER

1500 ENTER

500 ENTER

GRAPH TRACE

TI-83Y= 0.000112 X,T,θ,n x² - 492

ENTER

WINDOW

-3000 ENTER

3000 ENTER

500 ENTER

-1500 ENTER

1500 ENTER

500 ENTER

GRAPH TRACE

SHARP EL-9600cY= 0.000112 X/θ/T/n x² - 492

ENTER

WINDOW

-3000 ENTER

3000 ENTER

500 ENTER

-1500 ENTER

1500 ENTER

500 ENTER

GRAPH TRACE

CASIO CFX-9850GA PLUS

From the main menu, choose RUN.

Y= 0.000112 X,θ,T x² - 492

EXE

SHIFT F3

-3000 ENTER

3000 ENTER

500 ENTER

-1500 ENTER

1500 ENTER

500 ENTER

EXIT

F6 F1

Graphing Calculator Activity Keystrokes

For use with Technology Activity 9.5 on page 532.

TI-82

$Y=$ 2 X,T,θ x^2 + 3 X,T,θ - 4 ENTER

WINDOW

ZOOM 6

Find the positive root

Use the cursor keys, \leftarrow and \rightarrow , to move the trace cursor to select the lower bound at $x \approx 0$.

Press ENTER.

Use the cursor keys, \leftarrow and \rightarrow , to move the trace cursor to select the upper bound at $x \approx 1.1$.

Press ENTER.

Use the cursor keys, \leftarrow and \rightarrow , to move the trace cursor to select the guess at $x \approx 0.85$.

Press ENTER.

Find the negative root

Use the cursor keys, \leftarrow and \rightarrow , to move the trace cursor to select the lower bound at $x \approx -2.6$.

Press ENTER.

Use the cursor keys, \leftarrow and \rightarrow , to move the trace cursor to select the upper bound at $x \approx 0$.

Press ENTER.

Use the cursor keys, \leftarrow and \rightarrow , to move the trace cursor to select the guess at $x \approx -2.3$.

Press ENTER.

SHARP EL-9600c

$Y=$ 2 $X/\theta/T/n$ x^2 + 3 $X/\theta/T/n$ - 4

ENTER

ZOOM [A] 5

2ndF [CALC]5

2ndF [CALC]5

TI-83

$Y=$ 2 X,T,θ,n x^2 + 3 X,T,θ,n - 4 ENTER

WINDOW

ZOOM 6

Find the positive root

2nd [CALC] 2 0 ENTER 1.1 ENTER 0.85 ENTER

Find the negative root

2nd [CALC] 2 (-) 2.6 ENTER 0 ENTER (-)

2.3 ENTER

CASIO CFX-9850GA PLUS

From the main menu, choose GRAPH.

2 X,θ,T x^2 + 3 X,θ,T - 4 EXE

SHIFT F3 F3 EXIT

F6

F5 F1 \rightarrow

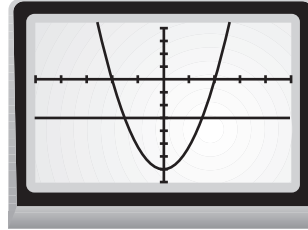
Graphing Calculator Activity

For use with pages 526–532.

GOAL

To graphically determine the point(s) of intersection of a quadratic equation and a linear equation.

In Chapter 7, you learned how to solve a system of linear equations. In this activity, you will find the point(s) of intersection between a quadratic equation and a linear equation.

**Activity**

- 1 Enter and graph the two equations in the same coordinate plane.

$$y = x^2 - 6x + 7 \qquad y = 0$$

- 2 Use the Intersection feature of your graphing calculator to estimate the point(s) of intersection of the two equations of Step 1. Since $y = 0$ is the equation of the x -axis, the point(s) of intersection occur on the x -axis.

- 3 Enter and graph the two equations.

$$y = x^2 - 4x + 2 \qquad y = 2$$

- 4 Find the points of intersection using your calculator. Since $y = 2$ is the second equation, the point(s) represent the solution to $x^2 - 4x + 2 = 2$.

Exercises

In Exercises 1–6, enter and plot the pair of equations in the same coordinate plane. Estimate the point(s) of intersection. If no intersection exists, state *no point of intersection*.

1. $y = x^2 - 7$
 $y = -3$

2. $y = -x^2 + 4x + 5$
 $y = 5$

3. $y = x^2 + 2x + 6$
 $y = 9$

4. $y = -x^2 + 10x - 20$
 $y = 8$

5. $y = x^2 + 2x$
 $y = -3$

6. $y = -x^2 + 5x - \frac{5}{4}$
 $y = 1$

7. How many point(s) of intersection are possible for a quadratic equation and a linear equation?

See page 39 for keystrokes.

Graphing Calculator Activity Keystrokes

For use with page 526–532.

TI-82

Y= X,T,θ x² - 6 X,T,θ
+ 7 ENTER
0 ENTER
WINDOW ENTER
0 ENTER
6 ENTER
1 ENTER
-5 ENTER
10 ENTER
1 ENTER
GRAPH
2nd TRACE 5 ENTER ENTER

SHARP EL-9600c

Y= X/θ/T/n x² - 6
X/θ/T/n + 7 ENTER
0 ENTER
WINDOW
0 ENTER
6 ENTER
1 ENTER
-5 ENTER
10 ENTER
1 ENTER
GRAPH TRACE

TI-83

Y= X,T,θ,n x² - 6 X,T,θ,n + 7 ENTER
0 ENTER
WINDOW
0 ENTER
6 ENTER
1 ENTER
-5 ENTER
10 ENTER
1 ENTER
GRAPH
2nd TRACE 5 ENTER ENTER
1 ENTER

CASIO CFX-9850GA PLUS

From the main menu, choose GRAPH.

X,T,θ x² - 6 X,T,θ + 7 EXE
0 EXE
SHIFT F3
0 EXE
6 EXE
1 EXE
-5 ENTER
10 ENTER
1 ENTER
F4 F1 EXIT
F6 SHIFT F1