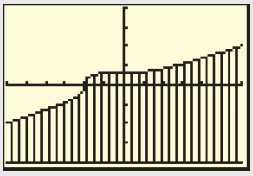
The parameters for the Shade command are as follows:

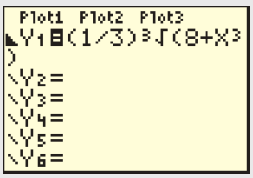
−4 is the lower function for the shaded region—in this case, we simply use the value of Ymin.
Y_1 is the upper function for the shaded region.
−6 and 6 are Xmin and Xmax.
1 is the shading pattern; there are four of them.
3 shades every third pixel; you may specify an integer from 1 to 8.

Pressing ENTER gives the following graph.



Alternative Method: There is an alternative method for shading available. It can be executed by selecting a graphing style from the Y= screen.

Using the cursor keys, move the cursor to the left of "Y_1." Successively press ENTER to cycle through the seven graphing styles. Select the "shade below" style as shown in the figure. Pressing GRAPH produces a shaded figure as before.



■

9.3 Exercises

Exer. 1–10: Sketch the graph of the inequality.

1 $3x - 2y < 6$

2 $4x + 3y < 12$

3 $2x + 3y \geq 2y + 1$

4 $2x + 2y > 3y + 3$

5 $y + 2 < x^2$

6 $y^2 - x \leq 0$

7 $x^2 + 1 \leq y$

8 $y - x^3 < 1$

9 $yx^2 \geq 1$

10 $x^2 + 4 \geq y$

Exer. 11–26: Sketch the graph of the system of inequalities.

11 $\begin{cases} x - y > -2 \\ x + y > -2 \end{cases}$

12 $\begin{cases} x - y > -1 \\ x + y < 3 \end{cases}$

13 $\begin{cases} 3x - y \geq -19 \\ 2x + 5y < 10 \end{cases}$

14 $\begin{cases} 2y - x \leq 4 \\ 3y + 2x < 6 \end{cases}$

15 $\begin{cases} 3x + y \leq 6 \\ y - 2x \geq 1 \\ x \geq -2 \\ y \leq 4 \end{cases}$

16 $\begin{cases} 2x + y \geq 2 \\ y \geq x \\ y \leq 6 \\ x \leq 4 \end{cases}$

17 $\begin{cases} x + 2y \leq 8 \\ 0 \leq x \leq 4 \\ 0 \leq y \leq 3 \end{cases}$

18 $\begin{cases} 2x + 3y \geq 6 \\ 0 \leq x \leq 5 \\ 0 \leq y \leq 4 \end{cases}$

19 $\begin{cases} |x| \geq 2 \\ |y| < 3 \end{cases}$

20 $\begin{cases} |x| \geq 4 \\ |y| \geq 3 \end{cases}$

21 $\begin{cases} |x + 1| < 3 \\ |y - 2| \leq 4 \end{cases}$

22 $\begin{cases} |x - 2| \leq 5 \\ |y - 4| > 2 \end{cases}$

23 $\begin{cases} x^2 + y^2 \leq 45 \\ x + y \leq -3 \end{cases}$

24 $\begin{cases} x^2 + y^2 > 1 \\ x^2 + y^2 < 4 \end{cases}$

25 $\begin{cases} x^2 \leq 1 - y \\ x \geq 1 + y \end{cases}$

26 $\begin{cases} x - y^2 < 0 \\ x + y^2 > 0 \end{cases}$