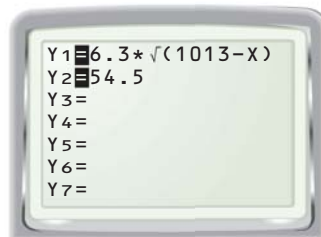


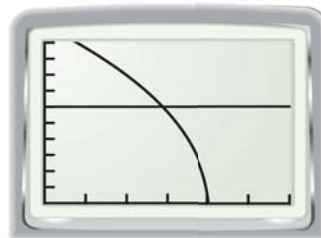
METHOD 2

Using a Graph You can also use a graph to solve the equation $6.3\sqrt{1013 - p} = 54.5$.

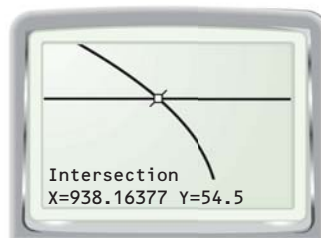
STEP 1 Enter the functions $y = 6.3\sqrt{1013 - x}$ and $y = 54.5$ into a graphing calculator.



STEP 2 Graph the functions from Step 1. Adjust the viewing window so that it shows the interval $800 \leq x \leq 1100$ with a scale of 50 and the interval $25 \leq y \leq 75$ with a scale of 5.



STEP 3 Find the intersection point of the two graphs using the *intersect* feature. The graphs intersect at about (938, 54.5).



► The mean sustained wind velocity is 54.5 meters per second when the air pressure is about 938 millibars.

PRACTICE

SOLVING EQUATIONS Solve the radical equation using a table and using a graph.

- $\sqrt{25 - x} = 8$
- $2.3\sqrt{x - 1} = 11.5$
- $4.3\sqrt{x - 7} = 30$
- $6\sqrt{2 - 7x} - 1.2 = 22.8$

5. **ROCKETS** A model rocket is launched 25 feet from you. When the rocket is at height h , the distance d between you and the rocket is given by $d = \sqrt{625 + h^2}$ where h and d are measured in feet. What is the rocket's height when the distance between you and the rocket is 100 feet?

6. **WHAT IF?** In the problem on page 460, what is the air pressure at the center of a hurricane when the mean sustained wind velocity is 25 meters per second?

7. **GEOMETRY** The lateral surface area L of a right circular cone is given by

$$L = \pi r \sqrt{r^2 + h^2}$$

where r is the radius and h is the height. Find the height of a right circular cone with a radius of 7.5 centimeters and a lateral surface area of 900 square centimeters.

