

Chapter 9.3 Homework Answer

Exercises 1-4 Solve, Draw Graphs Find all pairs of real numbers x, y that satisfy the system of equations. Draw graphs and show points of intersection (if any).

1.
$$\begin{aligned} 2x - y &= -2 \\ xy &= 4 \end{aligned}$$

2.
$$\begin{aligned} x + y &= 2 \\ x^2 + y^2 &= 2 \end{aligned}$$

3.
$$\begin{aligned} y &= x^2 - 4x + 4 \\ y &= -2x^2 + x + 16 \end{aligned}$$

4.
$$\begin{aligned} 2x - y &= 0 \\ xy - y &= 2 \end{aligned}$$

Exercises 5-6 Nonlinear Systems Solve the system of equations. If results involve irrational numbers, give approximations rounded off to two decimal places.

5.
$$y = e^x$$
$$x + \ln y = 0$$

6.
$$3^x + 3y = 10$$
$$3^{x-1} - y = 8$$

Exercises 7 Rectangles

7. Find the dimensions of a rectangle that has a diagonal of length 13 cm and a perimeter of 34 cm.