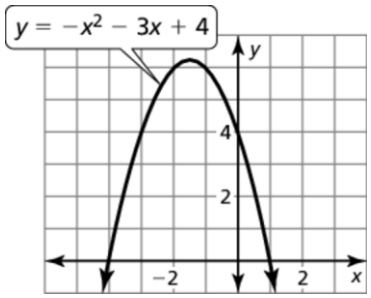
Name_____ Date _____

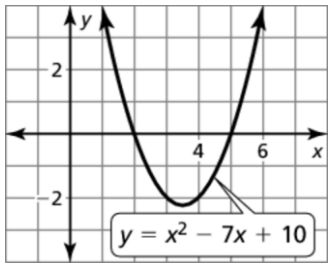
9.2 DAY THREE WS A

In Exercises 1 and 2, use the graph to solve the equation.

1. $-x^2 - 3x + 4 = 0$



2. $x^2 - 7x + 10 = 0$



In Exercises 3–5, write the equation in standard form.

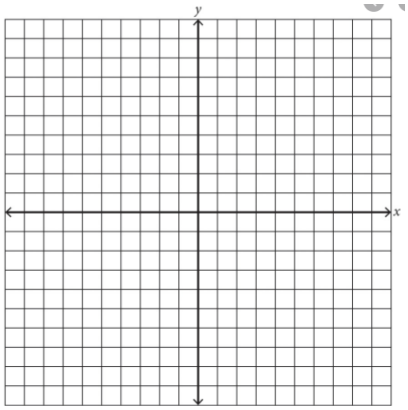
3. $3x^2 = 15$

4. $-x^2 = -14$

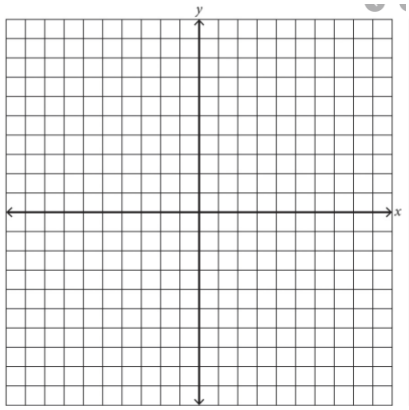
5. $4x - 2x^2 = 5$

In Exercises 6–11, solve the equation by graphing.

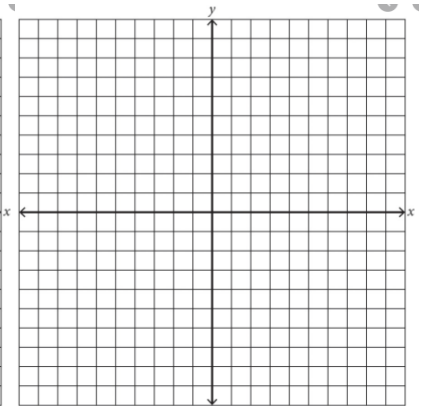
6. $x^2 + 3x = 0$



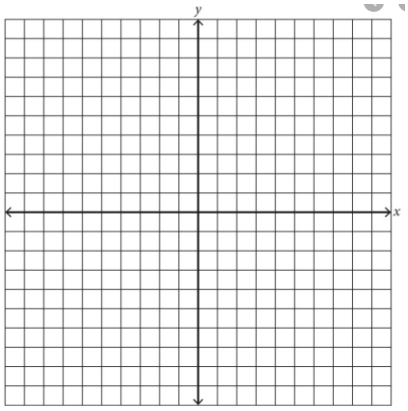
7. $x^2 + 2x + 1 = 0$



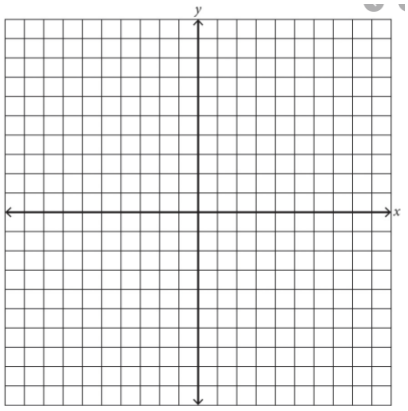
8. $x^2 - 3x + 6 = 0$



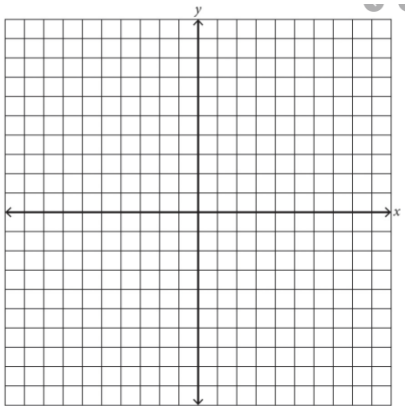
9. $x^2 - 4x - 5 = 0$



10. $-x^2 = 7x + 18$



11. $x^2 = -2x + 3$



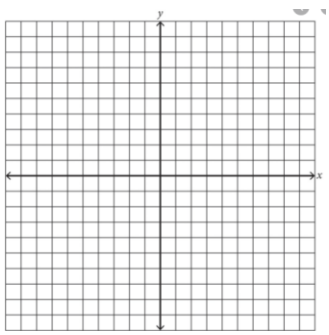
12. The height y (in feet) of a toss in bocce ball can be modeled by $y = -x^2 + 4x$, here x is the horizontal distance (in feet).

a. Interpret the x-intercepts of the graph of the equation.

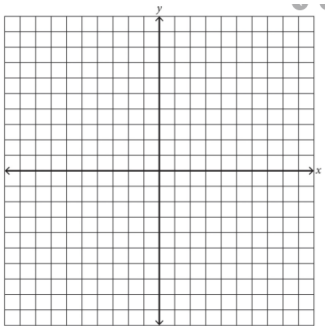
b. How far away does the bocce ball land on the ground?

In Exercises 13–15, solve the equation by using Method 2. Write what you typed into your calculator as your work for this part.

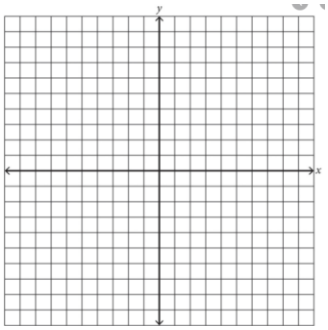
13. $x^2 = 4x + 12$



14. $8x - 15 = x^2$

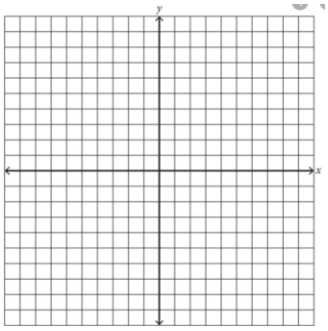


15. $x^2 + 9x = 10$

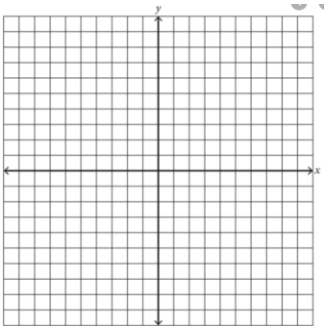


In Exercises 16–19, graph the function. Approximate the zeros of the function to the nearest tenth when necessary.

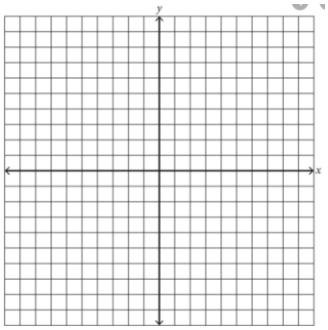
16. $f(x) = x^2 - 3x + 1$



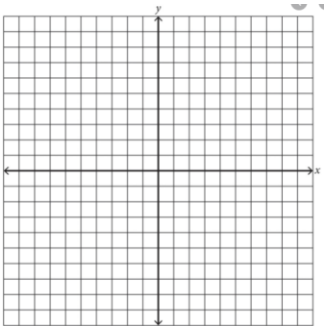
17. $f(x) = -x^2 + 8x - 6$



18. $y = \frac{1}{3}x^2 + 2x - 4$



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



20. The area (in square feet) of an x-foot-wide sidewalk can be modeled by $y = -0.002x^2 + 0.006x$. Find the width of the sidewalk to the nearest foot.