

Name _____

Period _____ Date _____

Practice 3.1.4**Remember to show your work!**

3-60. Beatrice is weighing combinations of geometric solids. She found that 4 cylinders and 5 prisms weigh 32 ounces and that 1 cylinder and 8 prisms weigh 35 ounces. Write and solve a system of equations to determine the weight of each cylinder and prism.

3-61. Solve each equation algebraically. Think about Rewriting, Looking Inside, or Undoing.

a. $5 - 3\left(\frac{1}{2}x + 2\right) = -7$

b. $5(\sqrt{x - 2} + 1) = 15$

c. $12 - \left(\frac{2x}{3} + x\right) = 2$

d. $-3(2x + 1)^3 = -192$

3-62. Is $x = -1$ a solution to the inequality $2x^2 + 5x - 3 \leq x^2 + 4x + 3$? What about $x=5$? Show how you know. What are three more solutions?

$x = -1$?

$x = 5$?

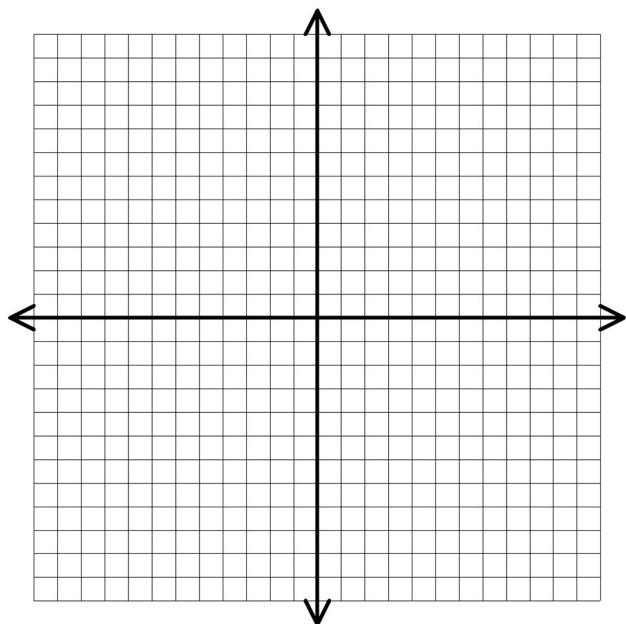
Three more solutions?

3-64. Determine if each of the following functions is odd, even, or neither. Show or explain how you know (mathematical test or graph).

a. $f(x) = 3x^3 + 2$

b. $y = x^6 + x^4$

3-66. What are the x- and y-intercepts and the vertex of $y = x^2 + 2x - 80$? Sketch the graph and write the equation in graphing form.



Work: