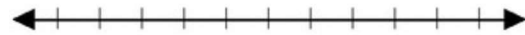


Practice 3.1.4 – Day 2**Remember to show your work!**

3-74. What are the boundary points for each of the following inequalities? Draw the boundaries on a number line and shade the solution regions.

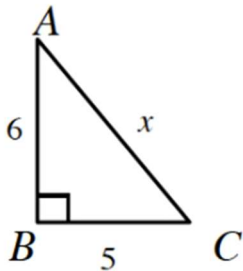
a. $3x + 2 \geq x - 6$

b. $2x^2 - 5x < 12$

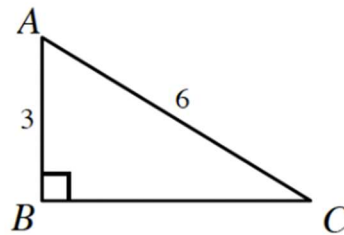


3-76. Solve for the indicated value. Leave your answer in exact form.

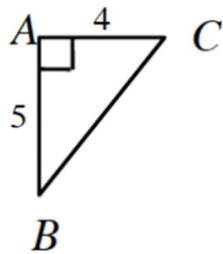
a. $x = \underline{\hspace{2cm}}$



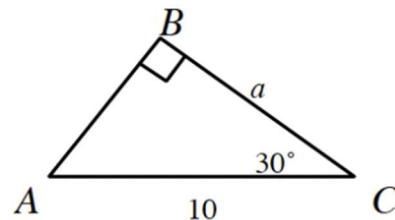
b. $m\angle C = \underline{\hspace{2cm}}$



c. $m\angle B = \underline{\hspace{2cm}}$

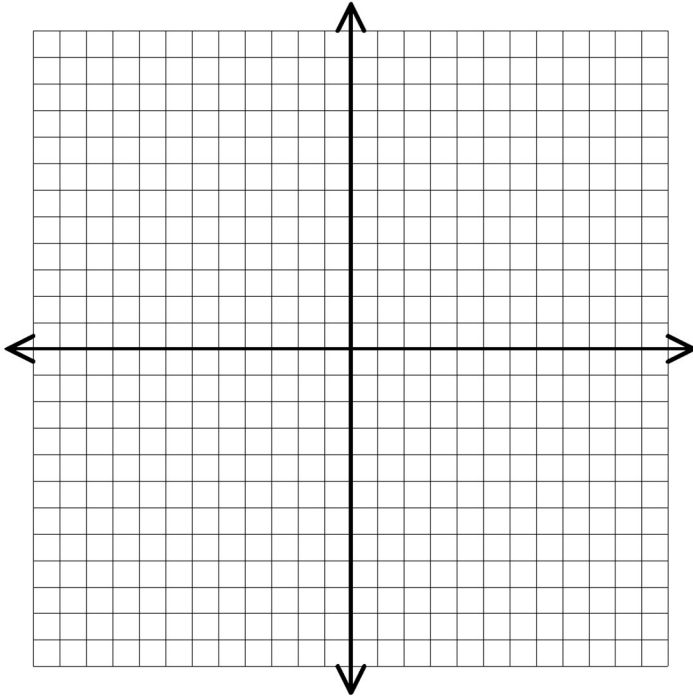


d. $a = \underline{\hspace{2cm}}$



3-77. Given $f(x) = x^3 + 1$ and $g(x) = (x + 1)^2$

a. Sketch the graphs of the two functions.



b. Solve $f(x)=9$.

c. Solve $g(x)=0$.

d. Solve $f(x)=-7$.

e. Solve $g(x)=12$.

f. For how many values of x does $f(x)$ equal $g(x)$? Explain.

g. Are each of the functions even, odd, or neither?

3-79. Daniela, Kieu, and Duyen decide to go to the movies one hot summer afternoon. The theater is having a summer special called Three Go Free. They will get free movie tickets if they each buy a large popcorn and a large soft drink. They take the deal and spend a total of \$22.50 on large popcorns and soft drinks. The next week, they go back again, only this time, they each pay \$8.00 for a ticket, they each get a large soft drink, but they share one large bucket of popcorn. This return trip costs them a total of \$37.50

a. What is the price of a large soft drink and the price of a large bucket of popcorn? Use a system of equations to solve this problem.