1-1 Homework: Applying Algebra to Geometric Situations

1. In the following two problems, solve for the value of x.

   (a) $x - 5 = 12$ (b) $13 - x = -3$

2. Given $g(x) = x^2 - 5x + 15$. Simplify $g(0)$.

3. Given $f(x) = 3x - 2$. Solve for x such that for $f(x) = 13$.

4. Given $h(x) = x^2 - x - 12$. Solve $h(x) = 0$.

5. Simplify each expression. (Leave it in radical form if necessary, not a decimal.)

   (a) $\sqrt{25}$ (b) $\sqrt{24}$

6. The line l has the equation $y = \frac{3}{2}x - 1$.

   (a) Write down it's slope. $m =$

   (b) Write down it's y-intercept. $b =$

   (c) Is the point $(4, 4)$ on the line l? Justify your answer.

7. On the grid below, graph the line $y = -\frac{1}{2}x + 2$.