Section 6.1: Additional Problems

1. Find the value of m so that the line $y = mx + 3$ will bisect(divide the area in half) the area that is bounded by $y = 3x^2 + 8$, and $y = 2x$ on the interval $[0, 2]$. Hint: draw a picture.

2. Sketch the region that is bounded by the curve $y = x^2$, the tangetn line to this curve at $x = 2$, the $x-$axis, and the $y-$axis. Compute the are of this region.

3. Find the area bounded by these curves on the interval from $x = -1$ to $x = 4$.

   $y = 2x^2 + 5$

   $y = 5x^2 - 7$