

3. [8 points]
- a. [4 points] Write a formula for the function $G(t)$ whose derivative is $\cos(5t)$ and whose graph passes through the point $(0, 3)$.
- b. [4 points] Write a formula for the function $H(t)$ whose derivative is $\cos(t^5)$ and whose graph passes through the point $(0, 3)$.
4. [5 points] A deep sea diver is swimming to the surface of the water from a depth of 50 meters. At a depth of x meters below the surface of the water, the water pressure is changing at a rate of $a(x)$ pascals/meter (pascal is the metric unit for pressure). If the water pressure is 592,000 pascals at a depth of 50 meters, write an expression involving integrals that gives the water pressure in pascals when the diver is x meters from the surface of the water.