Compute the following:

1. (3 points)
   \[ \int (2x + \sin x) \, dx \]

2. (4 points)
   \[ \int_0^1 x^6 \, dx \]

3. (3 points)
   \[ \frac{d}{dx} \int_0^x \frac{\tan^{-1}(4t)}{\sqrt{t^3 - 2}} \, dt \]