Name: _____ I.D. # _____ Sr. # ____

1. Find the average value of $f(x) = \sqrt{16 - x^2}$ on $[-4, 0]$.

2. Find the slope of the tangent line to $y = \int_{2^x}^{1} \sqrt[3]{t}\, dt$ at $x = 3$.

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1. Use areas to evaluate $\int_{-1}^{1} (1 - \sqrt{1 - x^2})\, dx$.

2. Find $f(2)$ if $\int_{x^2}^{1} f(t)\, dt = \cos(\pi x)$.