Quiz 10 Calculus 1 Due 12/1/2021

Each problem is worth 5 points. Open book, open notes, feel free to collaborate with anyone, but try to make sure you understand what you turn in well.

1. Evaluate each definite integral exactly and as a decimal correct to the nearest thousandth:
   a. $\int_4^7 \frac{1}{x} dx$

   b. $\int_5^9 x \, dx$

2. Evaluate each integral exactly:
   a. $\int_0^1 x^2 \, dx$

   b. $\int_0^2 x^2 \, dx$

   c. $\int_0^3 x^2 \, dx$

   d. $\int_0^{\pi/2} \sin x \, dx$

   e. $\int_0^{\pi} \sin x \, dx$

   f. $\int_0^{3\pi/2} \sin x \, dx$

   g. $\int_0^{2\pi} \sin x \, dx$

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3. Let $F(x) = \int_0^x t^2\, dt$ and let $G(x) = \int_0^x \sin t\, dt$. Evaluate each value of the functions exactly:

   a. $F(1) =$

   b. $F(2) =$

   c. $F(3) =$

   d. $G(\frac{\pi}{2}) =$

   e. $G(\pi) =$

   f. $G(\frac{3\pi}{2}) =$

   g. $G(2\pi) =$