

*This quiz is worth 10 points and you have 10 minutes to complete it. Show all work and circle your final answers.*

**Calculators are NOT allowed today.**

**1.** (5 pts) Consider the function  $A(x) = \int_0^x (2 - t) dt$ . Circle all of the following that apply. On the interval  $[0, 2]$ , the function  $A(x)$  is:

positive	increasing	concave up
negative	decreasing	concave down

**2.** (5 pts) Use integration by parts to find  $\int x \sin x dx$ . Then check your answer by differentiating. Show all work clearly.