Name: _____

Problem 1 (10 points) Use polar coordinates to evaluate the double integral $\iint_D 2\cos(x^2 + y^2)\,dA$ where D is the disk $D = \left\{ (r, \theta) \mid 0 \leq \theta \leq 2\pi, 0 \leq r \leq \sqrt{\pi/2} \right\}$.

Problem 2 (10 points) Evaluate the iterated integral $\int_0^1 \int_0^x \int_0^2 (x + y)\,dz\,dy\,dx$.