Problem 1. *(2 points) Write as a single number:* $\sum_{i=1}^{9} i^4 + \sum_{i=2}^{10}(-i^4)$.

Problem 2. *(2 points) What is the definition of* $\int_0^{\pi/2} \sin(x)dx$*?*
(Don't use the word "area".)

Problem 3. *(2 points) Compute* $\int_0^1 (2x - 4x^2)dx$.

Problem 4. *(2 points each)*
Use a left Riemann sum with $n = 3$ *to approximate* $\int_0^{\pi/2} \sin(x)dx$.

(a) Draw the picture.

(b) Write out the sum.