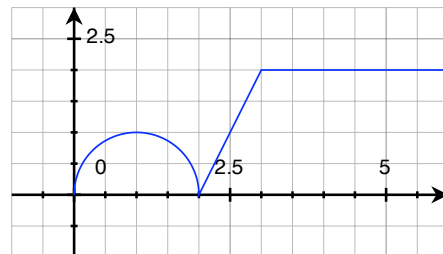


Read directions carefully and show all your work. Partial credit will be assigned based upon the correctness, completeness, and clarity of your answers.

1. (5 pts) Consider the graph of f shown below. Note: f consists of a semi-circle and straight line segments.

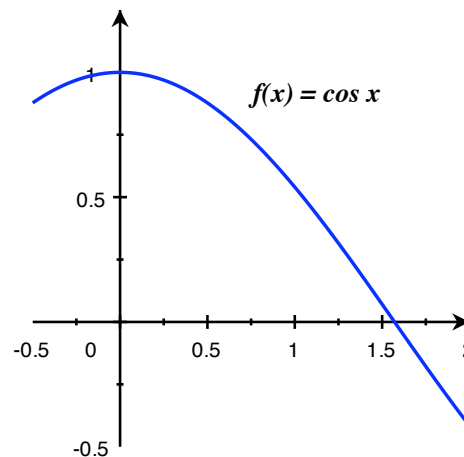
- (a) Shade the appropriate area on the graph to the right to represent the area determined by $\int_1^4 f(x) dx$.



- (b) Find the exact value of $\int_1^4 f(x) dx$.

2. (5 pts) Consider $\int_0^{1.5} \cos x dx$.

- (a) Annotate the graph of $f(x) = \cos x$ to show the area represented by the sum M_3 . Be sure to shade the desired area.



- (b) Find M_3 .