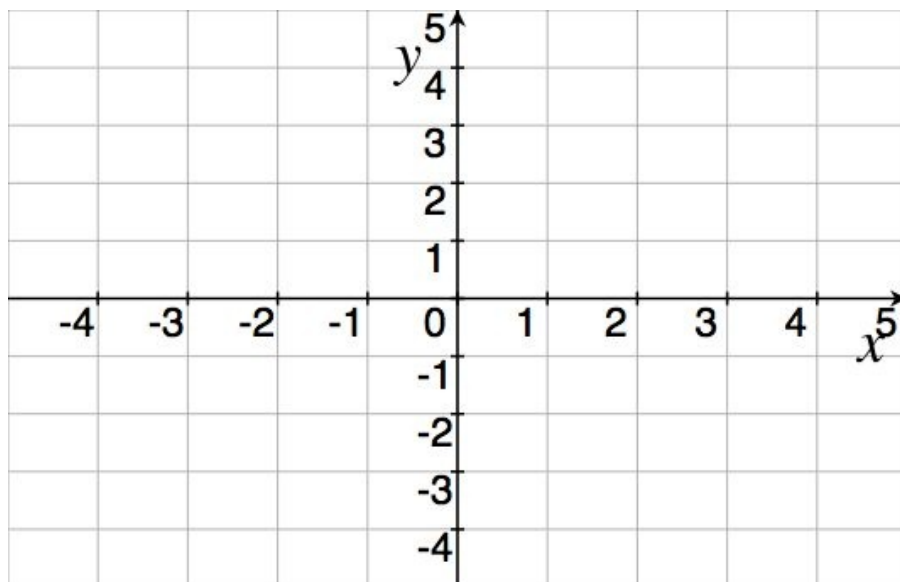


TMATH 125 Quiz 1

Show *all* your work (numerically, algebraically, or geometrically) for each and simplify. No credit is given without supporting work.

1. Let $h(x) = 2\sqrt{x}$.

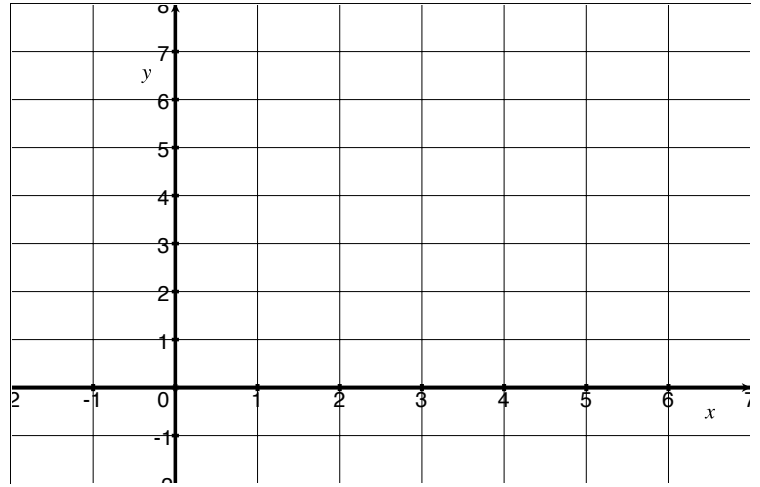
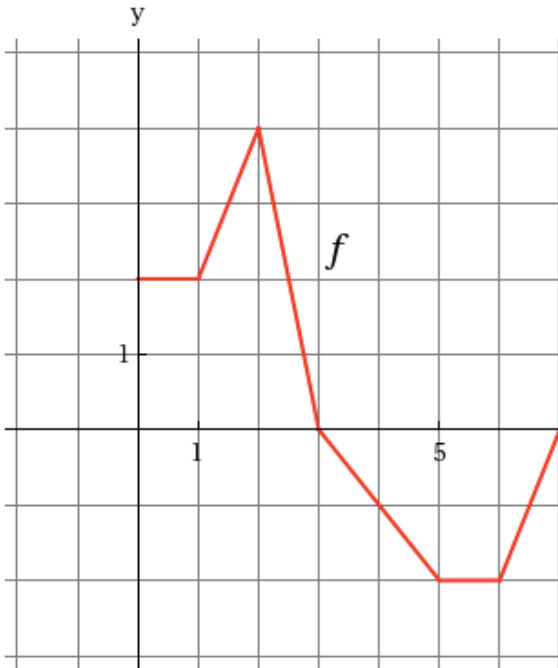
- (a) [1] (WebHW2 #6)
Draw the graph of h .



- (b) [2] (§5.1#2) Use your graph to estimate the area under the graph of h from 0 to 4 using four rectangles. Indicate if you are using right endpoints, left endpoints, or midpoints in your estimation.

(c) [2] (FTC Wks) Find $\frac{d}{dt} \left(\int_t^3 h(x) dx \right)$.

2. [3] (WebHW3 #7) Let $g(x) = \int_0^x f(t) dt$ where f is the function whose graph is shown. Sketch a rough graph of g .



3. [2] (WebHW3 #14) Evaluate $\int_0^{\frac{\pi}{4}} \sec(\theta) \tan(\theta) d\theta$.