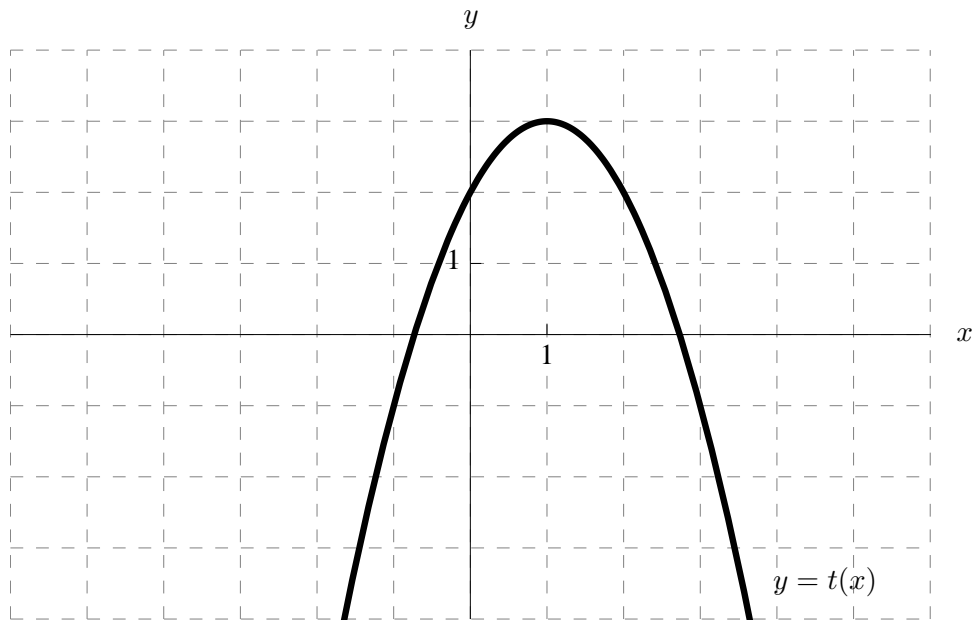


2. [16 points]

Graphed below is a function $t(x)$. Define $p(x) = x^2t(x)$, $q(x) = t(\sin(x))$, $r(x) = \frac{t(x)}{3x+1}$, and $s(x) = t(t(x))$. For this problem, do not assume $t(x)$ is quadratic.



Carefully estimate the following quantities.

a. [4 points] $p'(-1)$

b. [4 points] $q'(0)$

c. [4 points] $r'(3)$

d. [4 points] $s'(0)$