

<b>Name</b>
<b>Stud ID</b>

- 1) Use Part I of the Fundamental Theorem of Calculus to find the derivative of the function  $y = \int_{e^x}^0 \sin^3(t) dt$ .
- 2) The velocity of a function in m/s is given for a particle moving along a line. Find the distance traveled by the particle during the given time interval:

$$v(t) = t^2 - 2t - 8, \quad 1 \leq t \leq 6.$$