

QUIZ 1

Name _____

1. Solve each of the following integrals.

(a) $\int \left(t^{\frac{3}{2}} + \frac{1}{t\sqrt{t}} \right) dt$

(b) $\int_0^{\frac{\pi}{4}} (\sin(x) + \cos(x)) dx$

2. Ice is forming on a pond at a rate given by

$$\frac{dy}{dt} = k\sqrt{t}$$

where y is the thickness of the ice in inches at time t measured in hours since the ice started forming and k is a positive constant. Find y as a function of t .