

1. (2pts) Complete the formulas:

$$\frac{d}{dx} \log_a x =$$

$$\frac{d}{dx} a^x =$$

2. (4pts) Find  $\frac{d}{dt} \left( 3^{\cos(2t)} \right)$

3. (4pts) Find  $\int \frac{2^x}{2^x + 1} dx$