

10.2

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$$x = 1 + e^t, \quad y = t - t^2$$
$$dx = e^t dt$$

$$t - t^2 = 0$$

$$t(1-t) = 0$$

$$t = 0 \quad t = 1$$

$$A = \int_a^b y \, dx = \int_{\alpha=0}^{\beta=1} (t - t^2) e^t \, dt =$$

10.1

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$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$$

$$a) \left(\frac{x}{a}\right)^2 + \left(\frac{y}{b}\right)^2 = 1$$

$$\cos t = \frac{x}{a}, \quad \sin t = \frac{y}{b}$$

$$0 < t < 2\pi$$

$$x = a \cos t, \quad y = b \sin t, \quad 0 \leq t \leq 2\pi$$

b)

$$a = 3 \quad b = 2$$

$$\frac{x^2}{9} + \frac{y^2}{4} = 1$$

