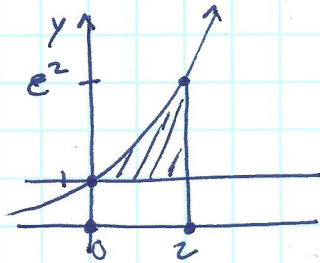


(13)

$y = e^x$ (upper)
 $y = 1$ (lower)
 $x \in [0, 2]$



$$\int_0^2 (e^x - 1) dx = 4.389056099 \approx \underline{4.389}$$

(14)

$y = 5 \ln(2x)$ (upper)
 $y = 3$ (lower)
 $x \in [3, 5]$

$$\int_3^5 (5 \ln(2x) - 3) dx = 14.68823529 \approx \underline{14.688}$$

(15)

$y = x^2$ (upper)
 $y = x^3$ (lower)
 $x \in [0, 1]$

$$\int_0^1 (x^2 - x^3) dx = 0.08333 \approx \underline{0.083}$$

(16)

$y = x^{1/2}$ (lower)
 $y = x^{1/3}$ (upper)
 $x \in [0, 1]$

$$\int_0^1 (x^{1/3} - x^{1/2}) dx \approx 0.0833340645 \approx \underline{0.083}$$

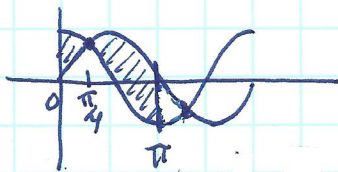
(17)

$y = \sin x + 2$ (upper)
 $y = 0.5$ (lower)
 $x \in [6, 10]$

$$\int_6^{10} (\sin x + 2 - 0.5) dx = 7.799241816 \approx \underline{7.799}$$

(18)

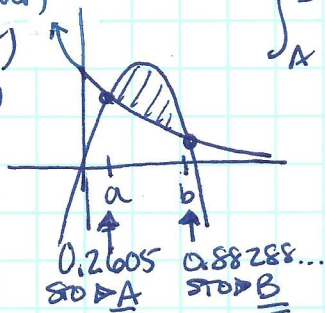
$y = \cos t$
 $y = \sin t$
 $t \in [0, \pi]$



$$\int_0^{\pi/4} (\cos t - \sin t) dt + \int_{\pi/4}^{\pi} (\sin t - \cos t) dt = 0.4142135624 + 2.414213562 = 2.828427125 \approx \underline{2.828}$$

(19)

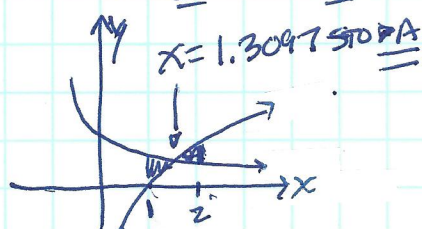
$y_1 = e^{-x}$ (lower)
 $y_2 = 4(x - x^2)$ (upper)



$$\int_A^B (4(x - x^2) - e^{-x}) dx = \int_A^B (y_2 - y_1) dx = 0.1721480674 \approx \underline{0.172}$$

(20)

$y_1 = e^{-x}$
 $y_2 = \ln x$
 $x \in [1, 2]$



$$\int_1^A (e^{-x} - \ln x) dx + \int_A^2 (\ln x - e^{-x}) dx = 0.0543238558 + 0.208074059 = 0.2623979148 \approx \underline{0.262}$$