

MATH 1710 Tutorial #3

Answers:

1. (a) $\frac{16\pi}{3}$ (b) $\frac{126\pi}{4}$ (c) $\pi\left(\frac{16}{3}\ln 2 - \frac{7}{2}\right)$

2. (a) $\int_{-1}^2 \sqrt{\frac{4+2x^2}{4+x^2}} dx$ (b) $\int_1^2 \sqrt{1+9y^4(4-3y^3)^{-4/3}} dy$

3. (a) $e^2 - \frac{7}{8}$ (b) $5^{3/2} - (\sqrt[3]{4} + 4)^{3/2}$

4. $\frac{25}{8} [J.]$

5. $2500g\pi\frac{15}{8} [J.]$

6. $200g [J.]$