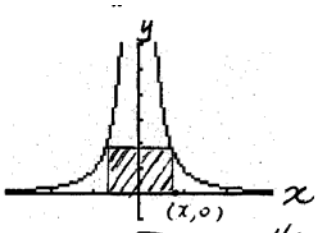
Problem of the Month (September)

Name _____

Date Submitted _____

Time Submitted _____

Solution



Answer: $2\sqrt[3]{2}$ or $2^{4/3}$

Method: One side $= 2x$, given $(x,0)$

$\therefore 2x =$ height

and $2x = \frac{1}{x^2}$

$2x^3 = 1$

$x^3 = \frac{1}{2}$, so $x = \sqrt[3]{\frac{1}{2}}$

$\therefore$ If Area $= 4x^2$

Area $= 4\left(\sqrt[3]{\frac{1}{2}}\right)^2$

$= 2^2 \cdot \frac{1^{2/3}}{2^{2/3}} = 2^{4/3}$

$10 prize for the first correct solution. If interested download a copy of the problem from the school website and return it to reception when done. Deadline for submission– Mon. Sept. 24 @ 8:30 am