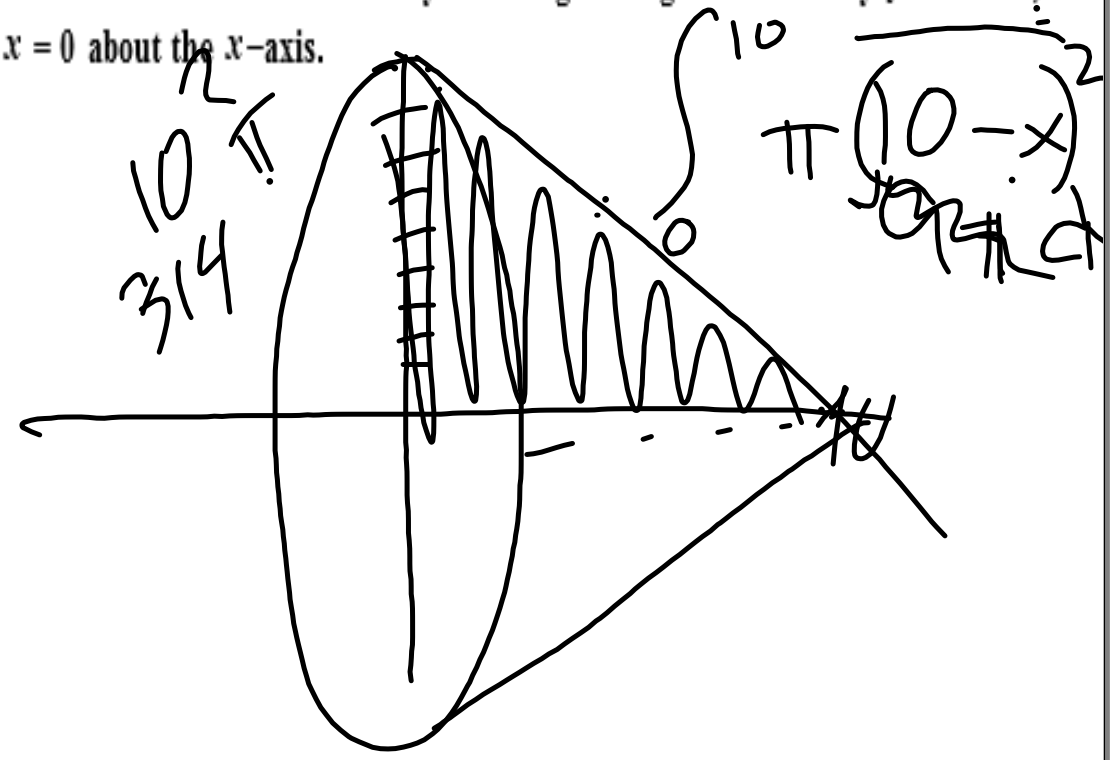
Find the volume of the solid with cross-sectional area $A(x)$.

$A(x) = x + 4, -7 \leq x \leq 5$

$V =$ [ ]

Compute the volume of the solid formed by revolving the region bounded by $y = 10 - x$, $y = 0$ and $x = 0$ about the x–axis.



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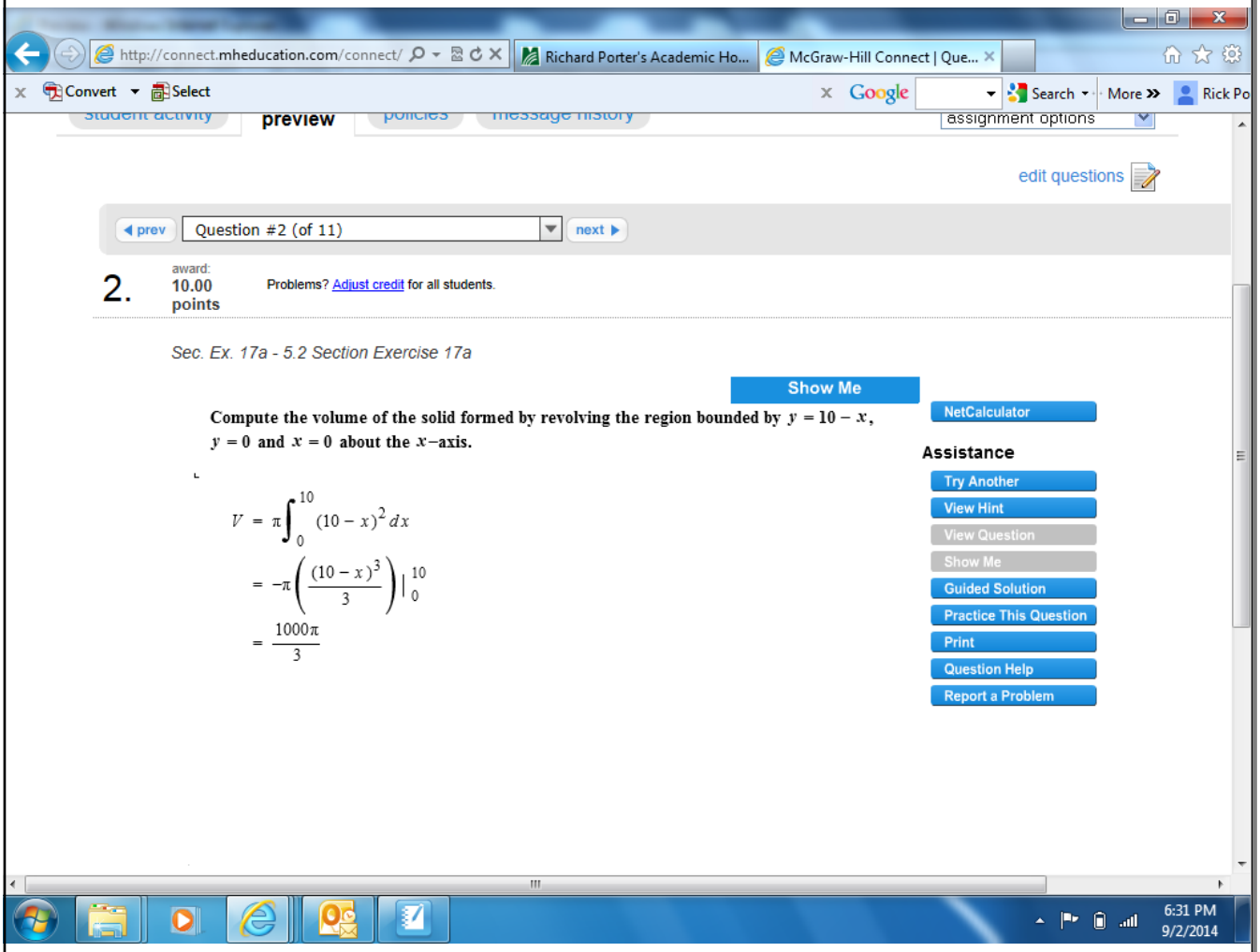
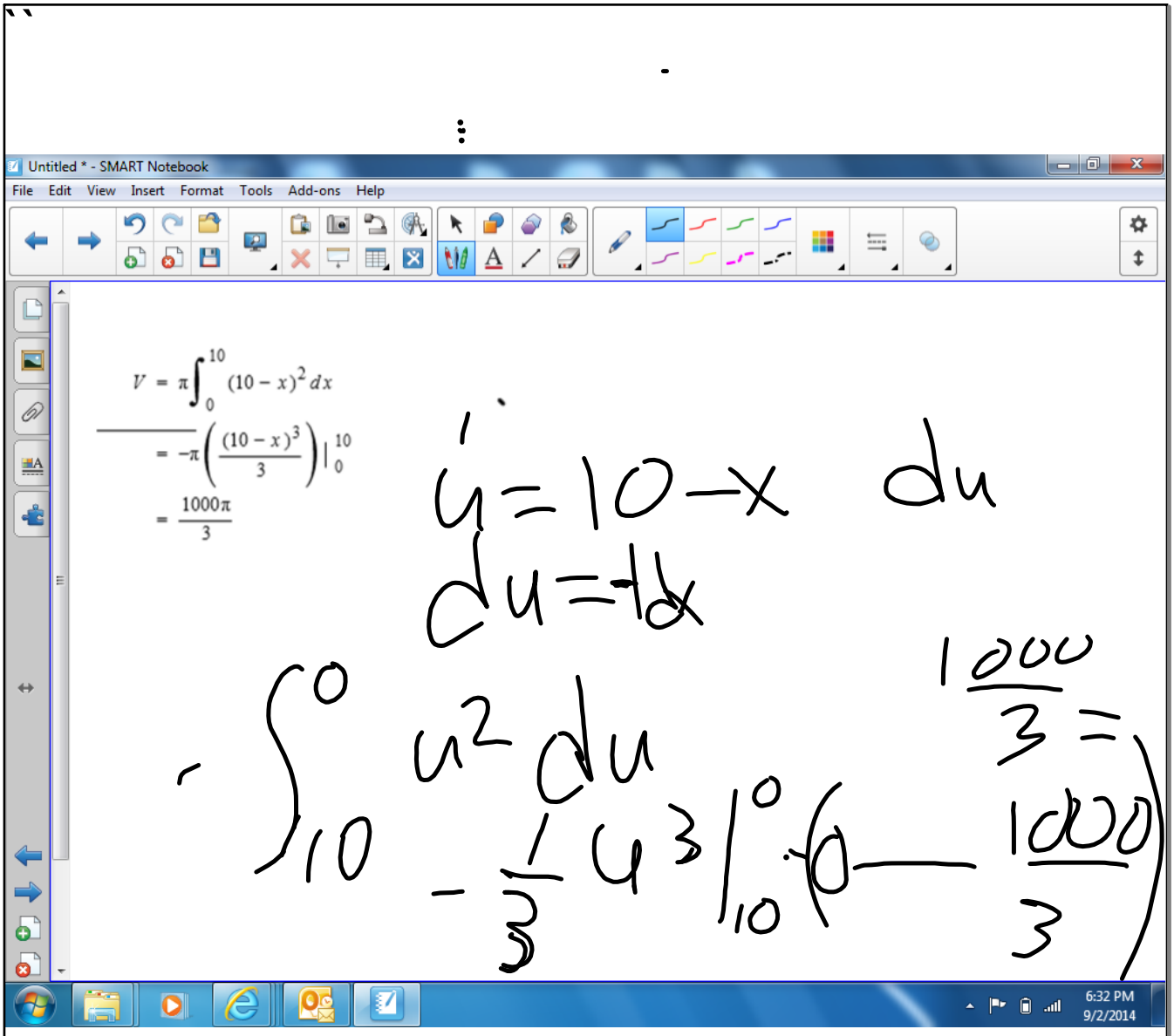


$$V = \pi \int_0^{10} (10 - x)^2 \, dx$$
$$= -\pi \left(\frac{(10 - x)^3}{3} \right) \Big|_0^{10}$$
$$= \frac{1000\pi}{3}$$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$V = \pi\int_0^{10}(10-x)^2\,dx$
$= -\pi\left(\frac{(10-x)^3}{3}\right)\Big|_0^{10}$
$= \frac{1000\pi}{3}$
$u = 10 - x$ du
$du = -1dx$
$-\int_{10}^{0} u^2\,du$
$-\frac{1}{3}u^3\Big|_{10}^{0}$
$0 - \frac{1000}{3}$
$\frac{1000}{3} =$
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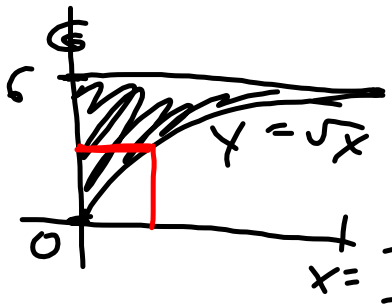
Compute the volume of the solid formed by revolving the given region about the given line.

Region bounded by $y = \sqrt{x}$, $y = 6$ and $x = 0$ about the $y-$axis.



$y = \sqrt{x}$

$x = y^2$

$\int_0^6 \pi r^2$

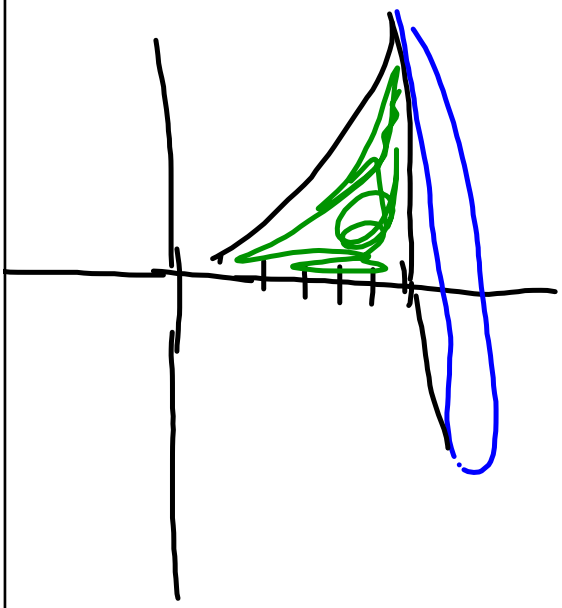
$\int_0^6 \pi (y^2)^2 dy$

$\int_0^6 \pi y^4 dy$

$\pi \cdot \frac{y^5}{5} \Big|_0^6$

$\pi \cdot \frac{6^5}{5} = 1555.2\pi$

Let R be the region bounded by $y = x^2$, $y = 0$ and $x = 6$. Compute the volume of the solid formed by revolving R about the $x-$ axis.

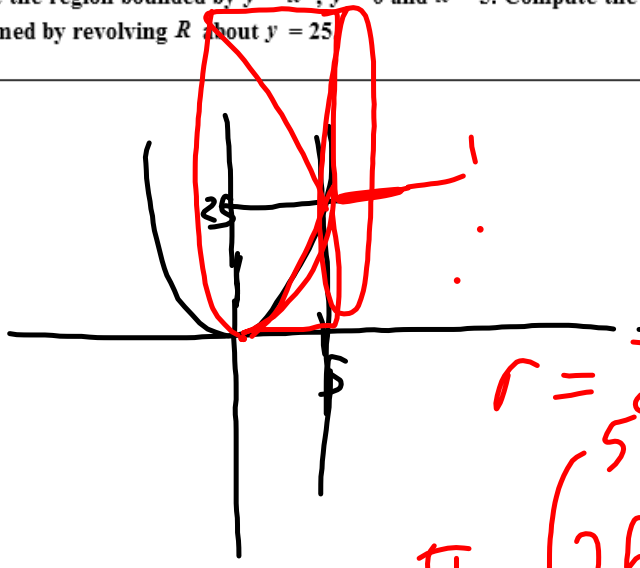


$$\int_0^6 \pi (x^2)^2 \, dx$$

$$\pi \left[\frac{x^5}{5} \right]_0^6$$

$$\pi \left[\frac{6^5}{5} \right]$$

Let R be the region bounded by $y = x^2$, $y = 0$ and $x = 5$. Compute the volume of the solid formed by revolving R about $y = 25$



$r = 25 - x^2$

$$\pi \int_0^5 25^2 - (25 - x^2)^2 \, dx$$

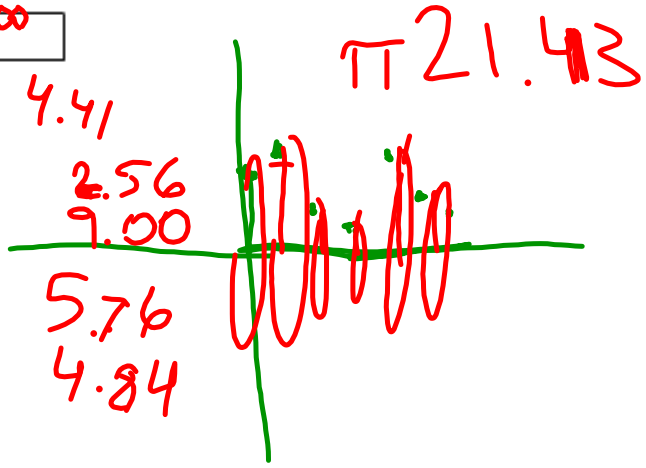
$$\pi \int_0^5 50x^2 - x^4 \, dx$$

$$\frac{50x^3}{3} - \frac{x^5}{5}$$

Use the given table of values to estimate the volume of the solid formed by revolving $y = f(x)$, $0 \le x \le 3$, about the $x-$axis. Round your answer to three decimal places.

x	0	0.5	1.0	1.5	2.0	2.5	3.0
$f(x)$	2.7	3.0	2.1	1.6	3.0	2.4	2.2

$V \approx$ 7.29 9.00



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