Week 11 Tuesday

November 13, 2018 8:39 AM

Quiz tomorrow 25.4

Test 3 Fri Nov 23rd

27.5-6
25.1-6
26.1-26.3

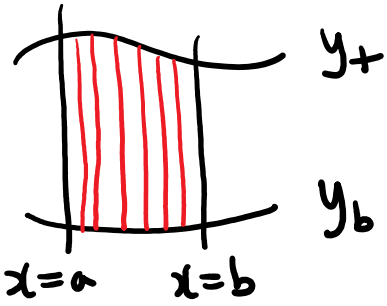
6 questions

27.8 Applications of Trig/Ln/Exponential
will not be on Test 3
will be on exam

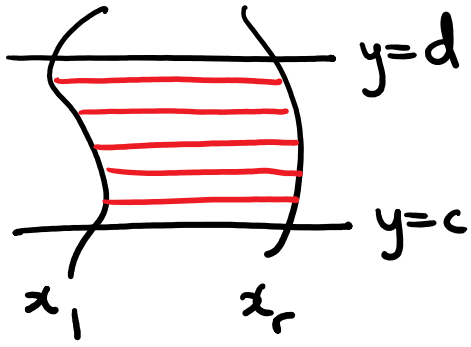
Practice Problems on website

26.2 Area

RECAP



$$A = \int_a^b (y_+ - y_b)\,dx$$



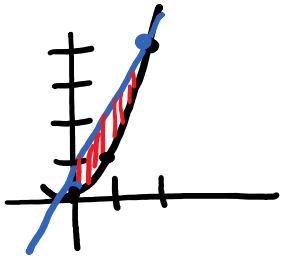
$$A = \int_c^d (x_r - x_1)\,dy$$

Ex: Set up the area bounded by $y = x^2$ and $y = 2x$ using:

a) vertical slices

b) horizontal slices

a)



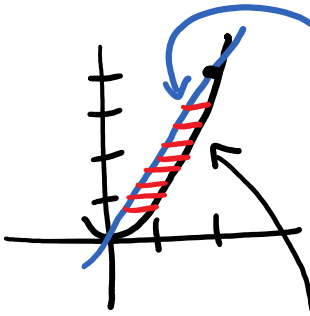
$y_t = 2x$

$y_b = x^2$

$0 \le x \le 2$

$$A = \int_0^2 (2x - x^2)\,dx$$

b)



$y = 2x$

$\frac{y}{2} = x$

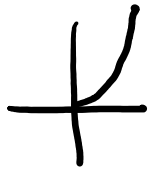
$x = \frac{y}{2}$

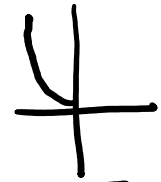
$x_1 = \frac{y}{2}$

$y = x^2$

$x^2 = y$

$x = \pm\sqrt{y}$





Choose $x = \sqrt{y}$

$x_r = \sqrt{y}$

$$\boxed{0 \le y \le 4}$$

$$A = \int_0^4 (x_r - x_l)\,dy$$

$$= \int_0^4 \left(\sqrt{y} - \frac{y}{2}\right) dy$$

Either way $A = \frac{4}{3}$

Tomorrow :