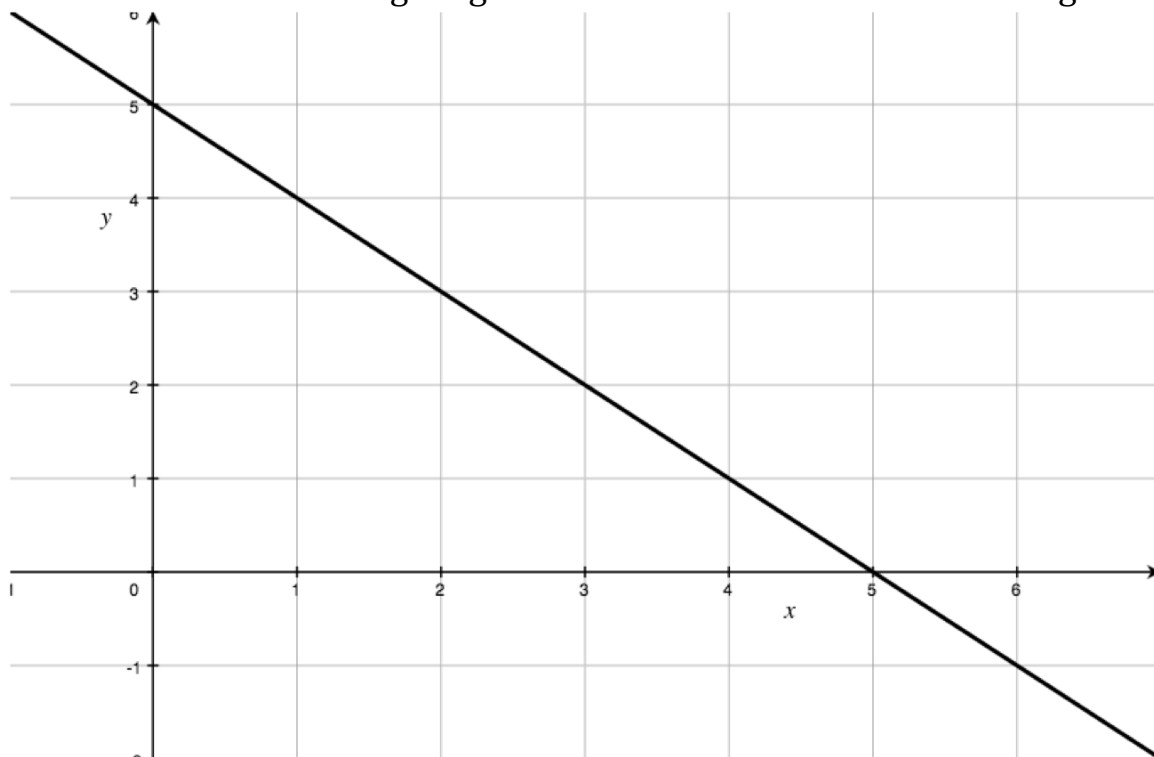


Precalc – Warm Up – 2/24/11

Name: _____ Period: _____

- 1) Estimate the area under the curve for the following function on the interval $0 \leq x \leq 6$ using a right-hand Riemann sum with 6 rectangles.

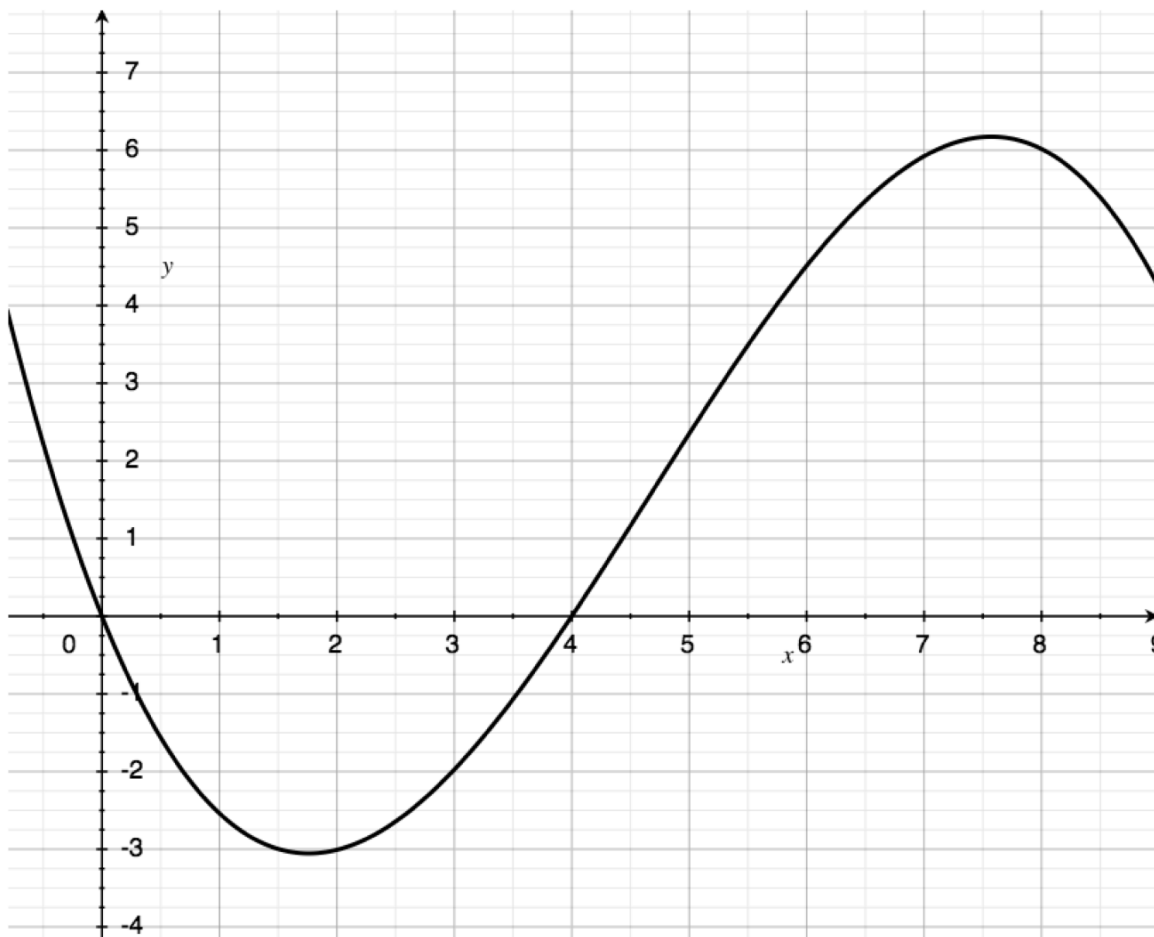


Precalc – Riemann Sums and Accuracy – 2/24/11

Name: _____ Period: _____

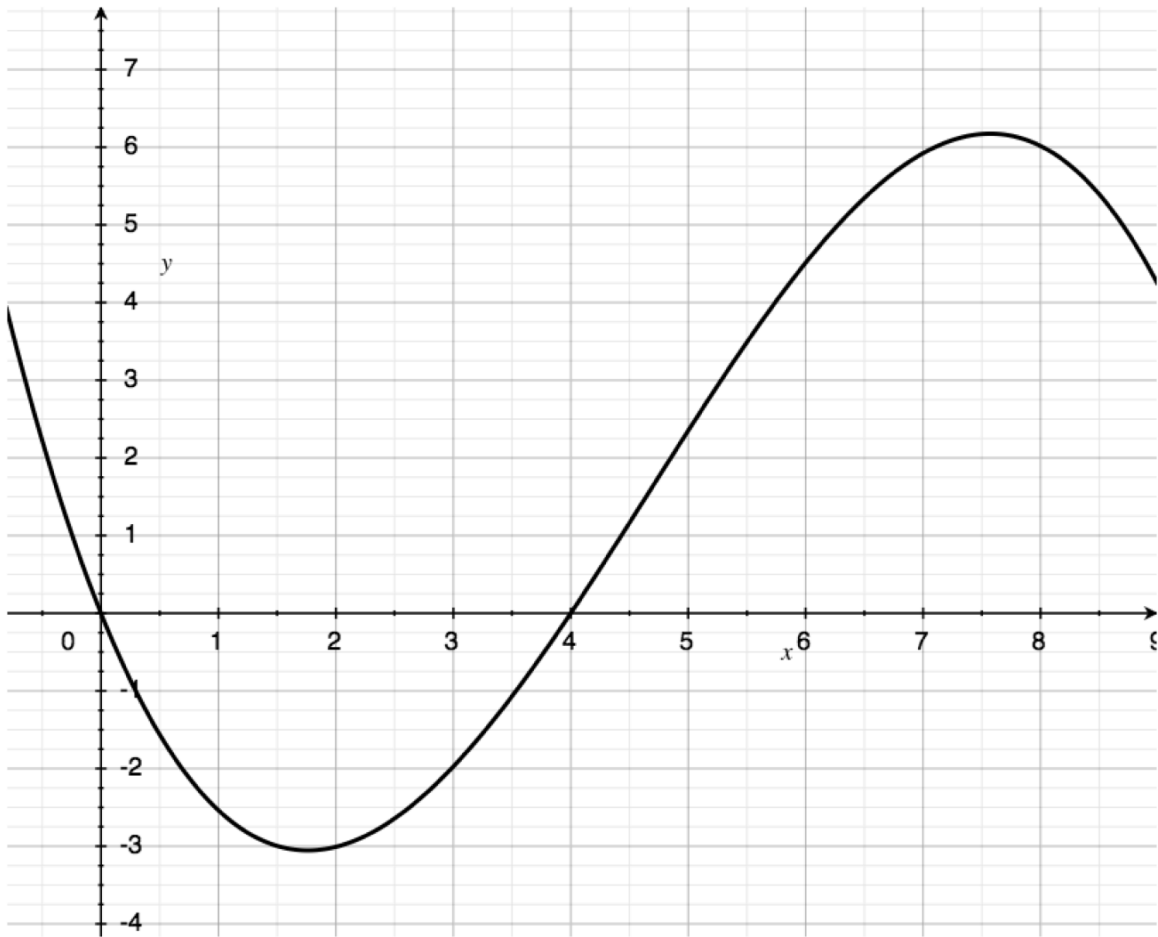
Students will be able to make a Riemann more accurate.
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1) Consider the following curve:

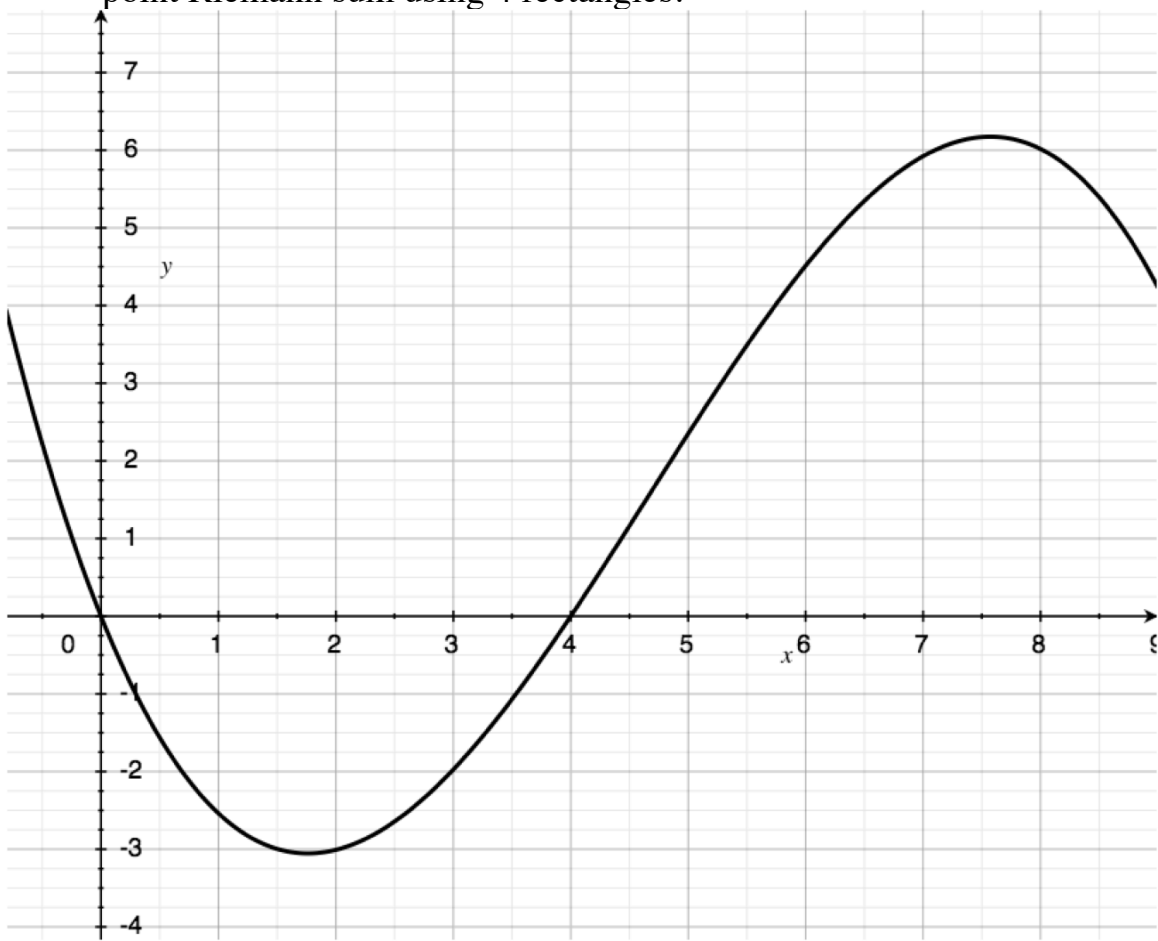


Estimate the area under the curve for the interval $0 \leq x \leq 8$ using a left-hand Riemann sum with 8 triangles.

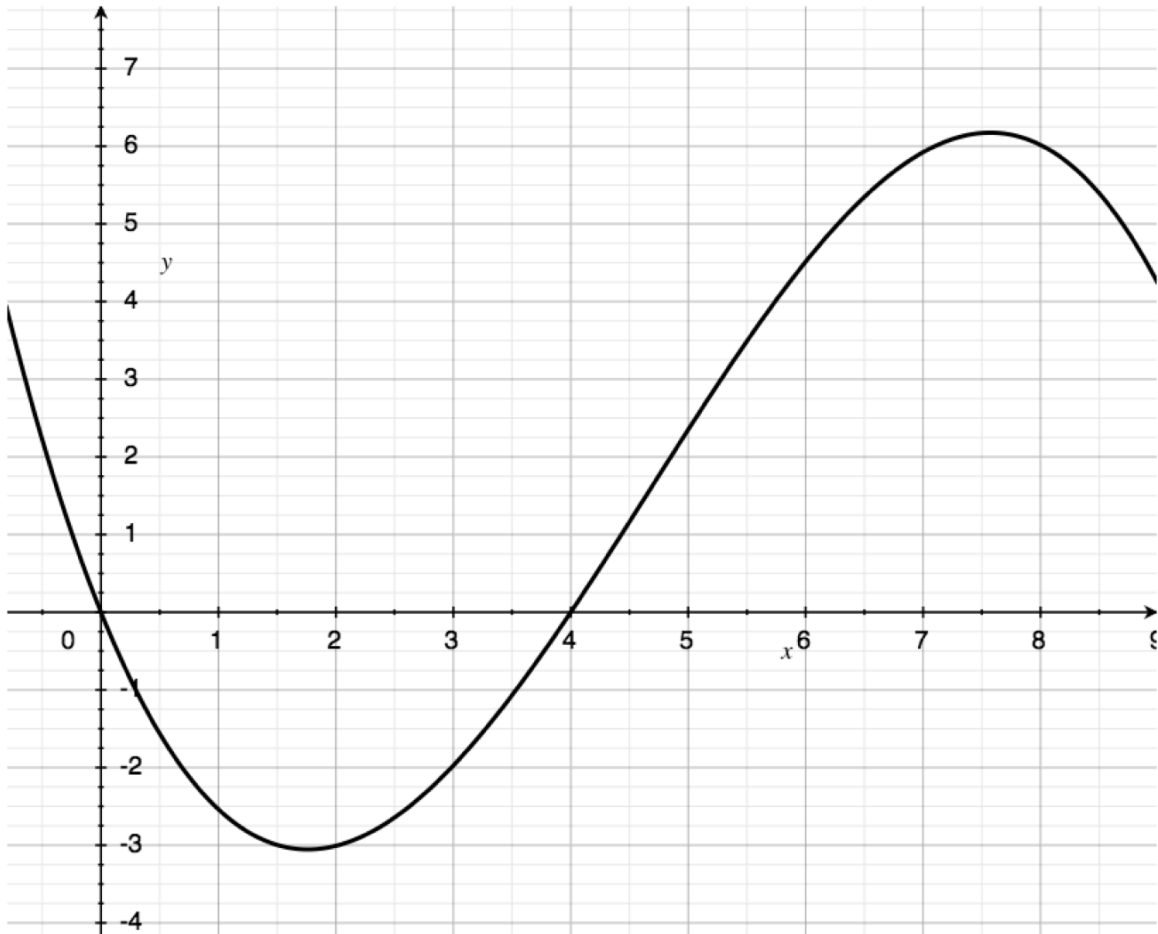
2) Estimate the area under the curve for the interval $0 \leq x \leq 8$ with a right-hand Riemann sum with 8 rectangles



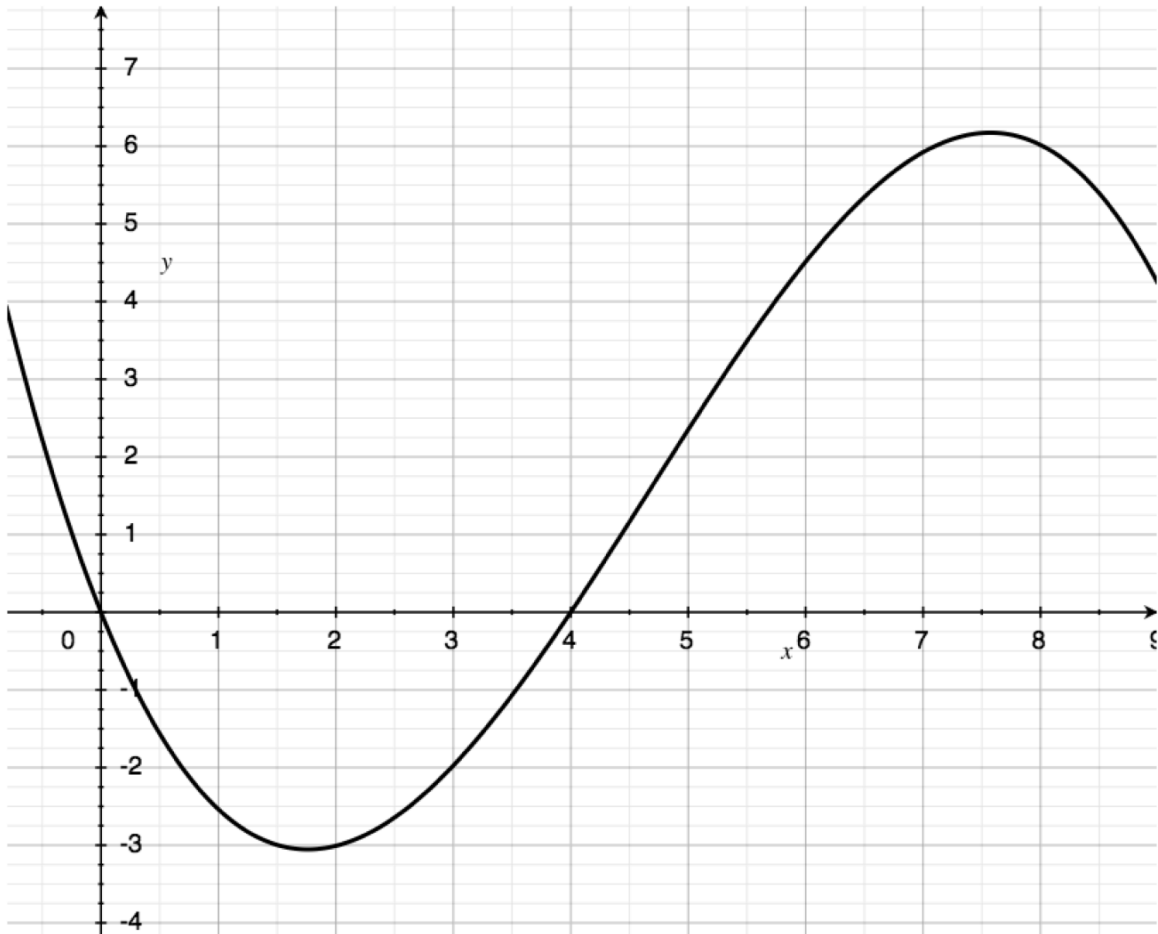
- 3) Estimate the area under the curve for the interval $0 \leq x \leq 8$ with a midpoint Riemann sum using 4 rectangles.



- 4) Estimate the area under the curve for the interval $0 \leq x \leq 8$ using a mid-point sum with 8 rectangles. Do you think that this estimate is more accurate or less accurate than the sum in 3)?



- 5) Estimate the area under the curve for the interval $0 \leq x \leq 8$ using a mid-point sum with 16 rectangles. Do you think that this estimate is more accurate or less accurate than the sum in 3)?



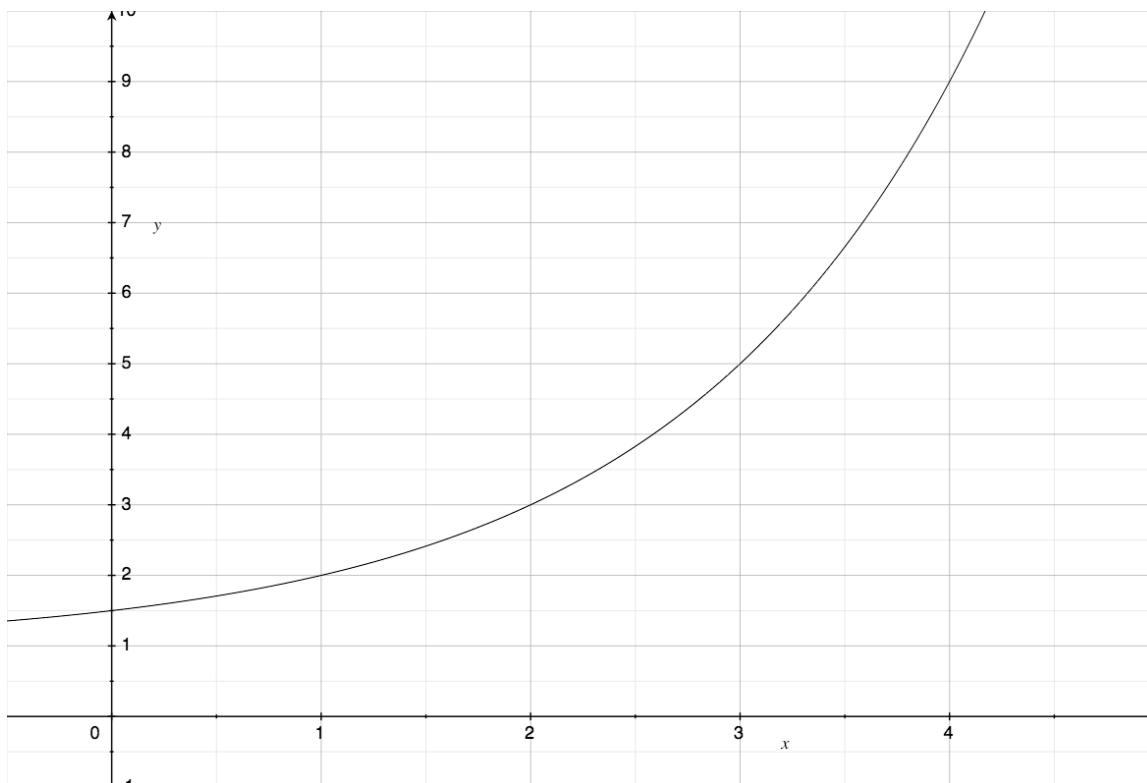
- 6) After watching the animation that Mr. Monte-Sano showed explain how you can make a Riemann sum more accurate.

Precalc – Exit Slip – 2/24/11

Name: _____

Period: _____

Draw and calculate TWO Riemann sums on the interval $0 \leq x \leq 4$. One sum should have **4 rectangles** and one should have **8 rectangles**. You may choose whether you use a left, right or mid-point sum.



Which sum is more accurate the one with 4 rectangles or the one with 8 rectangles? Shade in the area that represents the extra error.