

4. Do WebAssign 7.4b. Remember that the WebAssign will be reopened three days before Exam I for you to review the problems. You will be allowed to improve your score by a maximum of three points. Additional attempts on the problems will not be given.
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5. Use the trig substitution $x = \sin(t) + 2$ to evaluate

$$\int \frac{1}{\sqrt{4x - 3 - x^2}} dx.$$

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6. Use a trig substitution and a triangle to evaluate

$$\int \frac{x^2}{\sqrt{9 - x^2}} dx.$$

7. Find the **exact** area of the region bounded by the curves

$$y = \frac{x^3}{\sqrt{4 - x^2}}; \quad y = 0; \quad x = 0; \quad x = \sqrt{2}.$$

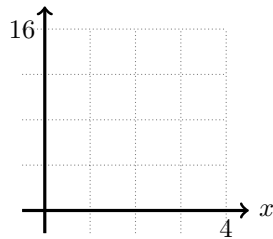
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8. Find the **exact** area of the region bounded by the curves

$$y = \frac{1}{x\sqrt{x^2 + 9}}; \quad y = 0; \quad x = \sqrt{3}; \quad x = 3$$

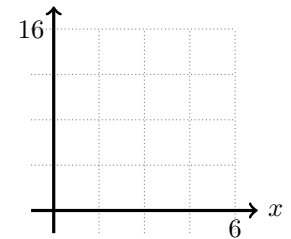
Understand	Recall formulas for left, right, midpoint, trapezoid and Simpson's rule.
Understand	Sketch Riemann Sums associated with the application of each rule.
Understand	Explain why the rules do not give exact answers, only estimates.
Apply	Estimate definite integrals using each rule.
Synthesize	Predict whether a each rule will over- or underestimate the integral of a particular function.
Synthesize	Evaluate the effectiveness of each rule by comparing the ratio of errors for different n .

1. Calculate the following approximations to $\int_0^4 x^2 dx$. Write out every step in the calculation, à la Example 1, p. 387. Sketch each rule.

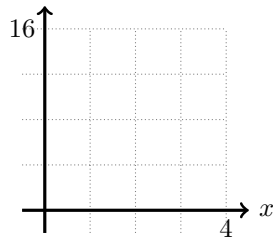
LEFT(2)



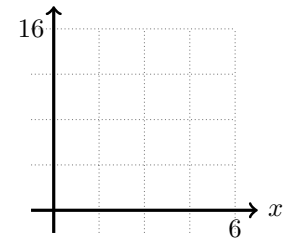
TRAP(2)



RIGHT(2)



MID(2)



Quiz (Leave this space blank)