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## Test 1 Crash Course

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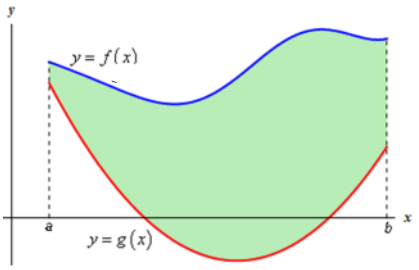
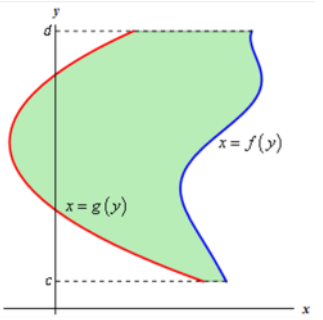
# 6.1 - Area

## Area Between Curves




$$Area = \int_a^b (top - bottom)dx$$

$$Area = \int_c^d (Right - left)dy$$

**Steps**

Step 1) Sketch the curves & determine the region bounded by the curves.
Step 2) Determine if the region is bounded top to bottom OR left to right and choose the appropriate formula.
Step 3) Find the integral boundaries
Step 4) Solve the integral

Note: This answer must ***always*** be positive

**Example:** Calculate the area bounded between $y = \sqrt{x}$ and $y = x^2$

**Example:** Compute the area between $f(x) = x^2 + 4x + 4$ and $g(x) = 4 - 3x$

**Example:** Find the area between $y = 1$ and $y = sinx$ for $0 \leq x \leq \pi$.

**Example:** Compute the area between $y = x^3$ and $y = x$

**Example:** Compute the area between $x = 2y^2$ and $x = 4 - y^2$

**Example:** Compute the area between $x = y^2$ and $y = x - 2$

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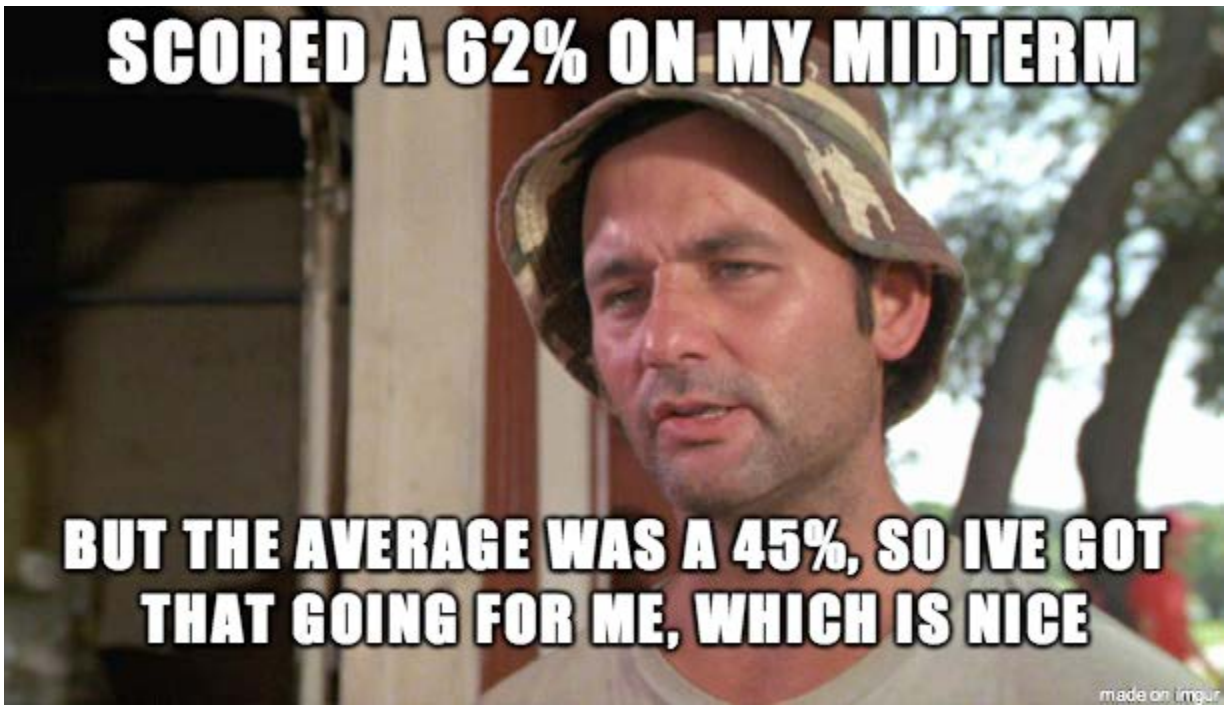
**We hope you found these tutorials useful in preparing for your test. If you like this style of teaching, considering checking out the Gradesavers Weekly Review Sessions for MATH 1014. Go to Gradesavers.com for dates and times!**

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