

Name: _____ Quiz Score: _____ /25

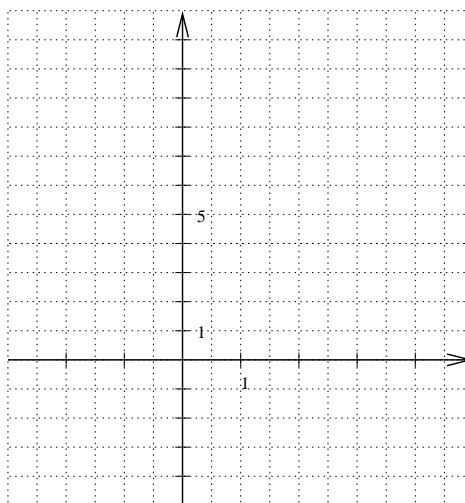
Quiz 5: Version A

Show your reasoning. Use standard notation correctly. Simplify your answers. NO CALCULATORS!

We wish to find the area A of the region bounded by the curves $y = f(x)$ and $y = g(x)$ where $f(x) = x^2$ and $g(x) = 3x$.

1. (5 pts) Find the points of intersection of the curves algebraically. (Set up and solve an equation.)

3. (5 pts) Sketch the graphs, labeling the points of intersection and shading the region whose area we wish to find.



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2. (5 pts) Determine algebraically which function is the "top" function on the interval determined by their points of intersection.

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4. (10 pts) Set up and evaluate an integral representing the area A . Write out each step using proper notation. Give an exact answer, simplified.