MAT 137 (Calculus II) Prof. Swift

In-class worksheet:Area Between Curves

1. Make a rough sketch of the region bounded by the curves $x = y^2$ and $y = x - 2$.

2. Compute the points where the curves intersect, and make a more accurate sketch.

3. Set up a definite integral for the area of the region. (Decide whether to integrate with respect to x or y.) You do *not* need to evaluate the integral.

4. To demonstrate how good your choice was, find an expression for the area as the sum of two definite integrals with respect to the other variable.