

Name: \_\_\_\_\_

Task Master: \_\_\_\_\_ Cynic: \_\_\_\_\_ Recorder: \_\_\_\_\_

MTH 254

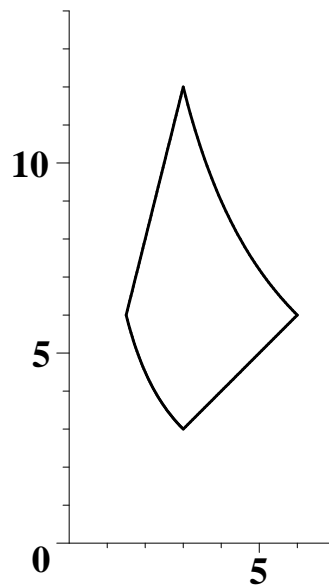
## INTEGRATION

Spring 2015

*Working in small groups (3 or 4 people), solve as many of the problems below as possible. Try to resolve questions within the group before asking for help. Each group member should then write up the solutions in their own words; Show your work! Full credit will only be given if your answer is supported by calculations and/or explanations as appropriate.*

1. Consider the region  $D$  in the  $xy$ -plane shown below, which is bounded by the curves

$$y = x \quad y = 4x \quad y = \frac{9}{x} \quad y = \frac{36}{x}$$



- (a) Using (single) integration, compute the area of the given region.  
(b) Find another way to compute the area, also using (single) integration.