## Quiz 4

Show your work, and write clearly. No textbooks, notes, or calculators.

1. (3 points) Find the area of the region between $y=x+3, y=1, x=0$, and $x=4$, in any way you like.
2. (7 points) Find the area of the region between $y=x^{2}-3 x$ and $y=-2$ as follows:
(a) Find all points of intersection of these two graphs.
(b) Decide which curve's graph lies above the other.
(c) Write out the definite integral used to calculate area.
(d) Evaluate the definite integral to arrive at a numerical answer.
