MATH 134 - Calculus with Fundamentals 2 Makeup Quiz 4 - March 20, 2018

Your Name: $\qquad$

## Directions

There are 30 total points possible (distributed as indicated in the questions on both sides). You may use a calculator, but not a phone or any other electronic device.
(A) (15) Let $R$ be the region between $y=x^{2}-1$ and the $x$-axis, and between $x=1$ and $x=2$. Find the volume of the solid obtained by rotating the region $R$ about the $y$-axis. (Partial credit will be given for a correct sketch of the region even if you cannot see how to set up the volume integrals.)
(B) (15) Integrate by parts: $\int x^{3} \ln (x / 2) d x$. (Partial credit will be given for the correct $d u$ and $v$ from your $u$ and $d v$ and for the correct parts formula even if you cannot see how to finish.)

