

**MAT 115 Worksheet 14 Hints**  
**Thursday, Nov 16 2017**

1. Use integration by parts with  $u = \sec x$  and  $dv = \sec^2 x \, dx$ .
2. Use the identity  $\tan^2 x = \sec^2 x - 1$ .
3. Use trig sub  $x = a \sin \theta$ .
4. Use partial fraction decomposition.
5. Use the substitution  $u = ax + b$ .
6. Use integration by parts.
7. Use integration by parts with  $u = \ln^n x$  and  $dv = dx$ .