## Math 2260 Quiz 13.5 (Practice)

Name

Points will be deducted for untidy or disorganized answers

1. Which of the following sequences converge, and which diverge? Find the limit of each convergent sequence.
(a) $a_{n}=\frac{n+(-1)^{n}}{2 n+1}$
(b) $b_{n}=\frac{\ln \left(n^{2}\right)}{n}$
(c) $c_{n}=(1+3 n)^{1 / n}$
(d) $d_{n}=\frac{\ln \left(2+e^{n}\right)}{3 n}$
(e) $e_{n}=\frac{1 \cdot 3 \cdot 5 \cdots(2 n-1)}{(2 n)^{n}}$
(f) $f_{n}=\frac{1 \cdot 3 \cdot 5 \cdots(2 n-1)}{n!}$
