3. Use L'Hopital's rule since it is of the form $\frac{\infty}{\infty}$: $\lim_{x\to\infty}\frac{x}{e^x}=\lim_{x\to\infty}\frac{1}{e^x}=0$.

4. $\lim_{x\to 0}\frac{x}{e^{-x}}=\frac{0}{1}=0$.

6. Use L'Hopital's rule twice: $\lim_{x\to\infty}\frac{\ln(5+e^x)}{3x}=\lim_{x\to\infty}\frac{\frac{e^x}{5+e^x}}{3}=\lim_{x\to\infty}\frac{e^x}{15+3e^x}=\lim_{x\to\infty}\frac{e^x}{3e^x}=\frac{1}{3}$.

7. (a) $\lim_{t\to 0}\frac{t^2+3}{2t^3+100t+1}=\frac{0+3}{0+0+1}=3$.

11. $\lim_{x\to\infty}\frac{r^x}{x}=0$ since it is of the form $\frac{0}{\infty}$ (note: $\lim_{x\to\infty}r^x=0$ because $0<r<1$).

13. Use L'Hopital's rule and simplify : $\lim_{x\to\infty}\frac{e^{2x}+7}{5e^{3x}-10}=\lim_{x\to\infty}\frac{2e^{2x}}{15e^{3x}}=\lim_{x\to\infty}\frac{2}{15e^x}=0$