Calculus II. Quiz 6. Name _____ Time_____
Show all work for full or partial credit. Put a box around your final answer in each part.

1. Find the limits, if they exist, and decide "diverges" or "converges."

(a) $\lim\limits_{n\to\infty} \dfrac{e^{2n} + 3n}{5e^{2n} - 6}$

(b) $\lim\limits_{n\to\infty} \dfrac{\cos(2n\pi)}{7}$

(c) $\lim\limits_{n\to\infty} 3e^n$

2. Decide if the sums converge or diverge, explain why. If there is a formula for the sum, find the value.

(a) $\sum\limits_{n=1}^{\infty} \dfrac{e^{2n} + 3n}{5e^{2n} - 6}$

(b) $\sum\limits_{n=1}^{\infty} \dfrac{2^n}{3^n}$

(c) $\sum\limits_{n=1}^{\infty} \dfrac{3}{e^{2n}}$