Evaluating an Interesting Limit

Using $\lim\limits_{n\to\infty}\left(1+\dfrac{1}{n}\right)^n = e$, calculate:

1. $\lim\limits_{n\to\infty}\left(1+\dfrac{1}{n}\right)^{3n}$

2. $\lim\limits_{n\to\infty}\left(1+\dfrac{2}{n}\right)^{5n}$

3. $\lim\limits_{n\to\infty}\left(1+\dfrac{1}{2n}\right)^{5n}$

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