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$$T_{10} = \binom{n}{9} \left(\frac{1}{5}x\right)^{n-9} \left(\frac{2}{5}\right)^9 = \binom{n}{9} \frac{2^9 x^{n-9}}{5^n}$$

$$T_9 = \binom{n}{8} \left(\frac{1}{5}x\right)^{n-8} \left(\frac{2}{5}\right)^8 = \binom{n}{8} \frac{x^{n-8} 2^8}{5^n}$$

כדי $T_9 > T_{10}$ אנו צריכים $T_9 > T_{10}$ מהאם זה נכון?

$$1 < \frac{\binom{n}{9} \frac{2^9}{5^n}}{\binom{n}{8} \frac{2^8}{5^n}} = \frac{n!}{9!(n-9)!} \cdot \frac{2^9}{5^n} \cdot \frac{8!(n-8)!}{n!} \cdot \frac{2^8}{5^n} = \frac{n-8}{9} \cdot 2 = \frac{2n-16}{9}$$

$$\begin{aligned} 9 &< 2n-16 \\ 25 &< 2n \rightarrow \boxed{n=13} \end{aligned}$$