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Expand $(x+5)^4$ in descending powers of x.

$$(x+5)^4$$

$$= \sum_{r=0}^{4} \binom{4}{r} (x)^{4-r} \cdot (5)^r$$

$$= x^4 + \binom{4}{1} x^{4-1} \cdot 5^1 + \binom{4}{2} x^{4-2} \cdot 5^2 + \binom{4}{3} x^{4-3} \cdot 5^3 + 5^4$$

$$= x^4 + 4x^3 \cdot 5 + 6x^2 \cdot 25 + 4x \cdot 125 + 625$$

$$= x^4 + 20x^3 + 150x^2 + 500x + 625$$