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Unit 7: Day 6
Scavenger Hunt

Find the 8th term in the geometric sequence if $a_4 = 8$ and $a_7 = 64$.

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Find the n th term of a geometric sequence if $a_2=1/30$, and $a_8=1/468750$

$$a_n = \frac{1}{6} \cdot \left(\frac{1}{5}\right)^{n-1}$$

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Find a_n for the arithmetic sequence if: $a_1=21$ and $d=-3$

$$a_n = -3n + 24$$

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Find the 4th term of $(x - 4)^6$

$$-1280x^3$$

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Find:

$$\frac{(n + 2)!}{n!}$$

$$n^2 + 3n + 2$$

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What is the 5th term for:

$$(2x - 3)^8$$

$$90720x^4$$

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Find a_n for the arithmetic sequence if $a_3=3$ and $a_{12}=39$

$$a_n = 4n - 9$$

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Find the sum of the
coefficients of $(3p - 5q)^3$

-8

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Find the 10th term in a geometric sequence if $a_3=8/9$ and $a_6=64/243$

$$\frac{1024}{19683}$$

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Find the n th term of a geometric sequence if $a_3=54$ and $a_{10}=118098$

$$a_n = 6 \cdot 3^{n-1}$$

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Find a_n for the arithmetic sequence if $a_1 = -6$ and $d = 5$

$$a_n = 5n - 11$$

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Find the 2nd term of $(x+7)^6$

$$42x^5$$

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Find:

$$\binom{n}{2} + \binom{n+2}{2}$$

$$n^2 + n + 1$$

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What is the 8th term in: $(4x-y)^9$

$$-576x^2y^7$$

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Find a_n for the arithmetic sequence if: $a_4=4$ and $a_{11}=0.5$

$$a_n = -0.5n + 6$$

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Find the sum of the coefficients of:

$$(9x - 10y)^6$$

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Find the sum of the coefficients of:

Write the series using
summation notation and find
the sum of the series:

$$3+10+17+\dots+101$$

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Find the sum of the coefficients of:

Write the series using
summation notation and find
the sum of the series:

$$111+108+105+\dots+27$$

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Find the sum of the coefficients of:

Write the series using
summation notation and find
the sum of the series:

$$2+4+6+\dots+70$$