$$\sum_{k=1}^{15}(7k-4)=780$$

Unit 7
Scavenger Hunt

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

128

Unit 7
Scavenger Hunt

Find the n^{th} term of a geometric sequence if $a_2 = 1/30$ and $a_8 = 1/468{,}750$.

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

Unit 7
Scavenger Hunt

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

$$a_n = -3n + 24$$

Unit 7
Scavenger Hunt

Find the 4^{th} term in the expansion of: $(x - 4)^6$

$-1280x^3$

Unit 7
Scavenger Hunt

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

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

Unit 7
Scavenger Hunt

What is the 5^{th} term in the expansion of $(2x - 3)^8$?

$$90,720x^4$$

Unit 7
Scavenger Hunt

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

$$a_n = 4n - 9$$

Unit 7
Scavenger Hunt

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

2+4+6+…+70

$$\sum_{k=1}^{35}(2k) = 1260$$

Unit 7
Scavenger Hunt

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

-8

Unit 7
Scavenger Hunt

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

$$\frac{1024}{19,683}$$

Unit 7
Scavenger Hunt

Find the n^{th} term of a geometric sequence if $a_3 = 54$ and $a_{10} = 118{,}098$.

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

Unit 7
Scavenger Hunt

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

$$a_n = 5n - 11$$

Unit 7
Scavenger Hunt

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

111+108+105+…+27

$$\sum_{k=1}^{29}(-3k+114)=2001$$

Unit 7
Scavenger Hunt

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

$$42x^5$$

Unit 7
Scavenger Hunt

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

$$n^2 + n + 1$$

Unit7
Scavenger Hunt

What is the 8^{th} term in the expansion of $(4x - y)^9$?

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

Unit 7
Scavenger Hunt

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

$$a_n = -0.5n + 6$$

Unit 7
Scavenger Hunt

Find the sum of the coefficients of: $(9x - 10y)^6$

1

Unit 7
Scavenger Hunt

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

3+10+17+…+101