Algebra 2CP Chapter 11 PRACTICE Test Answer Key

Number and show all work on a separate sheet of paper. NO WORK, NO CREDIT!!! Write your answers in the column to the right.

EQUATION BANK		
$\sum_{k=0}^n \frac{n!}{(n-k)!k!} a^{n-k} b^k$	$a_n = a_1 + (n-1)d$	$S_n = \frac{n}{2}(a_1 + a_n)$
$S=rac{a_1}{1-r}$	$S_n = \frac{n}{2}[2a_1 + (n-1)d]$	$S_n = \frac{a_1 - a_n r}{1 - r}$
$a_n = a_1 r^{n-1}$	$S_n = \frac{a_1(1-r^n)}{1-r}$	

1. Find the 22nd term of the arithmetic sequence in which $a_1 = -5$ and $d = 7$.1. 1422. Write an equation for the nth term of the arithmetic sequence 18, 11, 4, -3,2. $a_n = -7n + 25$ 3. Find the three arithmetic means between 56 and 28.3. 49, 42, 354. Find S _n for the arithmetic series in which $a_1 = 10$, $d = -6$, and $a_n = -50$ 42205. Evaluate $\sum_{n=2}^{13} (3n + 1)$.5. 2826. Find the fifth term of the geometric sequence for which $a_1 = 243$ and $r = -1/3$.6. 37. Find the equation for the nth term of the geometric sequence 36, 12, 4,7. $a_n = 36(1/3)^{n-1}$ 8. Find four geometric means between 3 and 96.8. 6, 12, 24, 489. Find the sum of the first 6 terms of the geometric series $4 - 2 + 1$ 9. 21/810. Find a_1 in a geometric series for which $S_n = -364$, $r = -3$, and $n = 6$.10. 211. Evaluate $\sum_{n=1}^{5} \left(-\frac{1}{2}\right)^{n-1}$.11. 11/1612. Find the sum of the infinite series $1/8 - 3/16 + 9/32 - 27/64 +,$ if it exists.12. does not exist13. Evaluate $\sum_{n=1}^{\infty} -2\left(-\frac{5}{8}\right)^{n-1}$.1316/1314. Write $0.3\overline{6}$ as a fraction.14. 4/1115. Expand $(3r + s)^5$.15. 243r ⁵ + 405r ⁴ s + 270r ³ s ² + 90r ² s ² + 15rs ⁴ + s ⁵ }			4.40
2. Write an equation for the firth term of the arithmetic sequence 18, 11, 4, -3, 3. Find the three arithmetic means between 56 and 28. 4. Find S _n for the arithmetic series in which $a_1 = 10$, $d = -6$, and $a_n = -50$ 5. Evaluate $\sum_{n=2}^{13} (3n + 1)$. 6. Find the fifth term of the geometric sequence for which $a_1 = 243$ and $r = -1/3$. 7. Find the equation for the nth term of the geometric sequence 36, 12, 4, 8. Find four geometric means between 3 and 96. 9. Find the sum of the first 6 terms of the geometric series $4 - 2 + 1$ 10. Find a_1 in a geometric series for which $S_n = -364$, $r = -3$, and $n = 6$. 11. Evaluate $\sum_{n=1}^{5} \left(-\frac{1}{2}\right)^{n-1}$. 12. does not exist 13. Evaluate $\sum_{n=1}^{\infty} -2\left(-\frac{5}{8}\right)^{n-1}$. 14. Write $0.\overline{36}$ as a fraction. 15. $243r^6 + 405r^4s + 270r^2s^2$	1. Find the 22nd term of the arithmetic sequence in which $a_1 = -5$ and $d = 7$.	1.	142
3. Find the three arithmetic means between 56 and 28.4. Find Sn for the arithmetic series in which $a_1 = 10$, $d = -6$, and $a_n = -50$ 42205. Evaluate $\sum_{n=2}^{13} (3n + 1)$.5. 2826. Find the fifth term of the geometric sequence for which $a_1 = 243$ and $r = -1/3$.6. 37. Find the equation for the nth term of the geometric sequence 36, 12, 4,7. $a_n = 36(1/3)^{n-1}$ 8. Find four geometric means between 3 and 96.9. 21/89. Find the sum of the first 6 terms of the geometric series $4 - 2 + 1$ 9. 21/810. Find a_1 in a geometric series for which $S_n = -364$, $r = -3$, and $n = 6$.10. 211. Evaluate $\sum_{n=1}^{5} \left(-\frac{1}{2}\right)^{n-1}$.11. 11/1612. Find the sum of the infinite series $1/8 - 3/16 + 9/32 - 27/64 +,$ if it exists.1316/1314. Write $0.\overline{36}$ as a fraction.14. $4/11$ 15. Evaluate $\sum_{n=1}^{\infty} -2\left(-\frac{5}{8}\right)^{n-1}$.15. $243r^5 + 405r^4s + 270r^3s^2$	2. Write an equation for the nth term of the arithmetic sequence 18, 11, 4, -3,		a _n = -7n + 25
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5. Evaluate $\sum_{n=2}^{\infty} (3n + 1)$. 6. Find the fifth term of the geometric sequence for which $a_1 = 243$ and $r = -1/3$. 6. 3 7. Find the equation for the nth term of the geometric sequence 36, 12, 4, 7. $a_n = 36(1/3)^{n-1}$ 8. Find four geometric means between 3 and 96. 8. 6, 12, 24, 48 9. Find the sum of the first 6 terms of the geometric series $4 - 2 + 1$ 9. 21/8 10. Find a_1 in a geometric series for which $S_n = -364$, $r = -3$, and $n = 6$. 10. 2 11. Evaluate $\sum_{n=1}^{5} \left(-\frac{1}{2}\right)^{n-1}$. 11. 11/16 12. Find the sum of the infinite series $1/8 - 3/16 + 9/32 - 27/64 +,$ if it exists. 12. does not exist 13. Evaluate $\sum_{n=1}^{\infty} -2\left(-\frac{5}{8}\right)^{n-1}$. 1316/13 14. Write 0.36 as a fraction. 14. 4/11 15. Evaluate $(2 - 1)^5$ 15. $243r^5 + 405r^4s + 270r^3s^2$	4. Find S_n for the arithmetic series in which $a_1 = 10$, $d = -6$, and $a_n = -50$	4.	-220
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9. Find the sum of the first 6 terms of the geometric series $4 - 2 + 1 - \dots$ 9. 21/810. Find a_1 in a geometric series for which $S_n = -364$, $r = -3$, and $n = 6$.10. 211. Evaluate $\sum_{n=1}^{5} \left(-\frac{1}{2}\right)^{n-1}$.11. 11/1612. Find the sum of the infinite series $1/8 - 3/16 + 9/32 - 27/64 + \dots$, if it exists.12. does not exist13. Evaluate $\sum_{n=1}^{\infty} -2\left(-\frac{5}{8}\right)^{n-1}$.1316/1314. Write $0.\overline{36}$ as a fraction.14. $4/11$ 15. Evapord $(2n+1)^{5}$ 15. $243r^5 + 405r^4s + 270r^3s^2$	7. Find the equation for the nth term of the geometric sequence 36, 12, 4,	7.	a _n = 36(1/3) ⁿ⁻¹
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15 Expand (9 + 1)	14. Write $0.\overline{36}$ as a fraction.	14.	4/11
	15. Expand $(3r + s)^5$.	15.	

16. Find the fourth term in the expansion of $(x + 2y)^6$.

16. 160x³y³