Senior Analysis APs and GPs	TEST	Name 11/18/04	CA
Solve the following in the space provided and circle final answers please!!			
1. Find the $18^{\text{th}}$ term of the sequence 80, 60	), 40, 20		<mark>-260</mark>
2. Which term of the sequence $\frac{1}{3}$ , 2, 12	is 432? (use formula t	o show work	) <mark>5th</mark>
Evaluate			
3. $\sum_{k=9}^{48} 7 - 2k$			<mark>-2000</mark>
4. $\sum_{k=5}^{12} \frac{1}{27} (3)^{k-1}$			<mark>9840</mark>
5. Fill in the GP 2,,, 72.		2√6, OR –2√0	$\frac{12,12\sqrt{6}}{5,12,-12\sqrt{6}}$
6. Find x if $\underline{x-1}$ , $\underline{2-2x}$ , $\underline{2x+2}$ form 3 term	is of an AP.		<mark>3</mark> 7

7. Find the  $51^{st}$  term and the sum of the first 51 terms of the AP whose  $3^{rd}$  term is 12 and  $18^{th}$  term is -3. (You may use a calculator, but show me all necessary information and what formulas you are plugging them into) -36, -561

8. Find the 6<sup>th</sup> term of an AP whose second term is 1 if the 3<sup>rd</sup>, 5<sup>th</sup> and 9<sup>th</sup> term of the AP form the first three terms of a GP.  $\therefore$  1 or 5

9. Find 3 numbers in an AP whose sum is -3 and whose product is 15.

Bonus:

Find three terms in a GP if the sum of the first two is 2 and the third term is  $\frac{1}{3}$ .

 $\frac{3,-1,\frac{1}{3}}{OR}$  $\frac{4}{3},-\frac{2}{3},\frac{1}{3}$ 

<mark>3, -1, -5 OR</mark> <mark>-5, -1, 3</mark>