Unit 9 Study Guide WS

*Refer to and study all class notes, practice problems, homework, and the Unit 9 Can You.*

1. Form a sequence that has 3 arithmetic means between $\frac{1}{2}$ and $\frac{11}{6}.$
2. Form a sequence that has two geometric means between 9 and $\frac{1}{3}. $
3. Write $\sum\_{k=4}^{7}3k$ in expanded form and then find the sum.
4. Express the series $\frac{1∙2}{2}$+$\frac{2∙3}{4}+\frac{3∙4}{6}+…\frac{8∙9}{16}$ using sigma notation.
5. Expand (2p+1)4.
6. Find the fourth term in the expansion of (2x-3y)14.
7. Use mathematical induction to prove that 1 + 5 + 9 + … + 4n – 3 = n(2n - 1).