

Student on a factorial finding mission Kevin Wong per D
Analysis Quiz 2 2013/14. NO Calculators please.

1. Find r and s such that $\frac{r!}{s!} = \frac{1}{20 \cdot 19 \cdot 18 \cdot 17}$ [2 pts]

$r =$ _____ $s =$ _____

2. Write without factorials. Simplify: $\frac{(n-2)!}{(n+1)!}$

3. What is the common difference of a 20 term arithmetic sequence that adds to 300, knowing that the first term is 2? [3]

4. The 2nd term of a geometric series is 5. The 11th term is 100. Find the common ratio. [3]

3. $4 + 11/2 + 7 + 17/2 + 10 + \dots + 1000 =$ _____ [3]

4. Find the geometric mean of 3, 2, 5 and 5 exactly. Explain what this number represents. [3]

7. $6 - \frac{6}{2^2} + \frac{6}{2^4} - \frac{6}{2^6} + \dots + \frac{6}{2^{188}} =$ [3]