

Math camp problem set 1

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Solve all problems by hand, and using R code. Simplify where possible using rules of exponents and logarithms.

1. $\sum_{k=1}^4 (k-1)^2$

2. $\prod_{i=2}^{10} \frac{i+1}{i}$

3. $\log(e^2)$

4. $e^4 e^{10}$

5. $10^3 10^{-2}$

6. $400^{1/2}$

7. $f(x) = 2x^2 + 3x - 7$. Solve for $x = 12$. For $x = -2$

8. Find the slope and y-intercept of the line that passes through (1,7) and (4,2)