

Quiz 1 Key — MA161 — August 29, 2018

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Min	Mean	Max
1	14.5	20

1. (10 points) Find a formula for the inverse of the function

$$f(x) = \frac{2x + 1}{2 - x}.$$

$$f^{-1}(x) = \frac{2x - 1}{2 + x}$$

2. (10 points) Express the given quantity as a single logarithm.

$$\frac{2}{3} \ln(x + 8) - \ln(\sqrt[3]{x}) - \frac{\ln(x^2 - 9)}{3}$$

$$\ln \left(\sqrt[3]{\frac{(x + 8)^2}{x(x^2 - 9)}} \right)$$

Note: this problem appeared on the first midterm exam in the fall of 2017.