

Problem statement Suppose $Z(x) = \frac{3x - 5}{2x - 1}$.

- a) Compute $Z'(x)$. What are $Z(1)$ and $Z'(1)$?
- b) Suppose s is any number in the domain of Z , and $t = Z(s)$. Solve this equation for s . Explain why solving this equation verifies that Z is one-to-one.
- c) Find W , the function inverse to Z , and compute W' . What are $W(-2)$ and $W'(-2)$?
- d) Explain the relationships between the numerical answers in a) and c).