

University of Nebraska-Lincoln  
Digital Signal Processing: Quiz 1

August 29, 2025

Name: \_\_\_\_\_

Total Points: 10

1. (10 points) Consider the frequency response

$$H(e^{j\omega}) = \frac{1 + e^{-j\omega}}{3 - 2e^{-j\omega}}$$

Find the **real part** of  $H(e^{j\omega})$  as a function of  $\omega$ . **Note:** don't leave any  $j$ 's,  $i$ 's,  $\sqrt{-1}$ 's, etc.