Problem 2

\[ G_p(s) = \frac{4\left(\frac{s}{10} + 1\right)}{\left(\frac{s}{2} + 1\right)\left(\frac{s}{15} + 1\right)} \]

Sketch the pole-zero map and verify with MATLAB.

Function is composed of gain, 1 zero, 2 poles.

Magnitude:
- Gain 20 \( \log_{10}(4) = 12.04 \) dB

\[ \text{Zero at } 10 \]

\[ \text{Zero at } 20 \]

\[ \text{Pole at } 2 \]

\[ \text{Pole at } 15 \]

Add together