

81. We find the difference in the two applications of the Doppler formula:

$$f_2 - f_1 = 37 = f \left(\frac{340 + 25}{340 - 15} - \frac{340}{340 - 15} \right) = f \left(\frac{25}{340 - 15} \right)$$

which leads to $f = 481 \approx 480$ Hz.