

Chapter 10:

(Q 10.1) REF: witness the past (18 unigram, 17 bigrams)
HYP2: past witness (11 unig., 10 bigrams)

Unigrams that match: past witness (11 unigrams)

bigrams that match: pa as st wi it tu ne es ss (9 bigrams)

$$\text{Unigram } P = 11/11$$

$$\text{Unigram } R = 11/18$$

$$\text{Bigram } P = 9/10$$

$$\text{Bigram } R = 9/17$$

$$\text{chr } P = (11/11 + 9/10) / 2 = .95$$

$$\text{chr } R = (11/18 + 9/17) / 2 = 0.57$$

$$\begin{aligned} \text{chr}_{f2,2} &= \frac{5 \text{ chr } P * \text{ chr } R}{4 \text{ chr } P + \text{ chr } R} = \frac{5 \times .95 \times 0.57}{4 \times .95 + 0.57} \\ &= 0.6199 \end{aligned}$$