OK, no OOV words

Toy train corpus:

This is the house that Jack built.

Toy test corpus:

This is Jack.

What's the perplexity of the Bigram LM?

$$p(Jack | is) = \frac{c(is \ Jack)}{c(is)} = 0$$
$$p(\mathbf{w}_{test}) = 0$$

$$\mathcal{P} = \inf$$