You are giving N = 2 identical fuses. Their rating is the same; it is one of the following values:

0.5 mA, 1 mA, 2 mA, 5 mA, 10 mA, 20 mA, 50 mA, 100 mA, 200 mA, 500 mA, 1 A

Since the fuses are not marked, you test them repeatedly with different currents to determine the unknown rating. When the current exceeds the rating, the fuse is irreversibly destroyed.

Devise a strategy that minimizes the maximum number of tests to reliably determine the fuses' current rating.

How many tests T are required to distinguish R different ratings, if you have N fuses?

Note: All N fuses may be destroyed in the process.