

1. Longest shortest word ladders found

a. 3 letters

- i. Height: 7
- ii. Egg - Why
- iii. Egg, Erg, Err, Ear, War, Way, why

b. 4 letters

- i. Height: 8
- ii. Acme - Tyro
- iii. Tyro, tyre, tyee, twee, awee, alee, alme, acme

c. 5 letters

- i. Height: 8
- ii. Knoll - Smite
- iii. Smite, smile, spile, spill, Spell, Snell, Knell, Knoll

2. I used uncommon words with letters in weird positions and words that didn't share any

letters. For example, 'adieu' has a lot of vowels, but most of the second words I entered didn't have a possible word ladder. The random word generator helped with finding a second word as a starter to find longer ladders.

3. The fewer letters mean there are fewer connections to form. If we treat them as permutations instead of words, then the possible ladder size increases exponentially when the word size increases

4. 'Adieu' is a really hard word to connect with another word. I tried for 5 different words before giving up. I think 6 letter words are where the difficulty really shows. There might not be a word with only a single character difference especially when the word gets

longer. The word can't be treated as a permutation since only specific combinations of letters are words.