

[Advent of Code](#) [\[About\]](#) [\[Events\]](#) [\[Shop\]](#) [\[Settings\]](#) [\[Log Out\]](#) [Chris Brese](#) [8\\*](#)  
[<y>2017</y>](#) [\[Calendar\]](#) [\[AoC++\]](#) [\[Sponsors\]](#) [\[Leaderboard\]](#) [\[Stats\]](#)

--- Day 4: High-Entropy Passphrases ---

A new system policy has been put in place that requires all accounts to use a passphrase instead of simply a password. A passphrase consists of a series of words (lowercase letters) separated by spaces.

To ensure security, a valid passphrase must contain no duplicate words.

For example:

- `aa bb cc dd ee` is valid.
- `aa bb cc dd aa` is not valid - the word `aa` appears more than once.
- `aa bb cc dd aaa` is valid - `aa` and `aaa` count as different words.

The system's full passphrase list is available as your puzzle input. How many passphrases are valid?

Your puzzle answer was `455`.

--- Part Two ---

For added security, yet another system policy has been put in place. Now, a valid passphrase must contain no two words that are anagrams of each other - that is, a passphrase is invalid if any word's letters can be rearranged to form any other word in the passphrase.

For example:

- `abcde fghij` is a valid passphrase.
- `abcde xyz ecdab` is not valid - the letters from the third word can be rearranged to form the first word.
- `a ab abc abd abf abj` is a valid passphrase, because all letters need to be used when forming another word.
- `iiii oiii ooii oooi oooo` is valid.
- `oiii ioii iioi iiio` is not valid - any of these words can be rearranged to form any other word.

Under this new system policy, how many passphrases are valid?

Your puzzle answer was `186`.

Both parts of this puzzle are complete! They provide two gold stars: \*\*

At this point, you should [return to your Advent calendar](#) and try another puzzle.

If you still want to see it, you can [get your puzzle input](#).

You can also [\[Share\]](#) this puzzle.

Our [sponsors](#) help make Advent of Code possible:

[Novetta](#) - Unleash your imagination. Innovate at Novetta.