**Week 1**

1. True or False: The most efficient way to map reads to a reference genome is by assembling the reads into a genome, then comparing this genome with the reference.

True

**False**

1. True or False: The most efficient way to map reads to a reference genome is by using global alignment to align each read to the reference genome.

True

**False**

1. What is the runtime of BruteForcePatternMatching?

**O(|*Text*|\*|*Patterns*|)**

O(|*Text*|2)

O(|*Text*|)

O(|*Patterns*|)

A diagram of a tree

AI-generated content may be incorrect.O(|*Text*|\*|*Patterns*| + |*Patterns*|)

O(|*LongestPattern*|)

1. Which patterns could have been used to construct the following trie? (Select all that apply.)

**dale bandana** banana

danny **candle dandy**

1. Given the following suffix tree of an unknown text, identify all starting positions in the underlying text of Pattern = "na". Use 0-based indexing and enter the starting positions as space-separated integers **in increasing order**.

A diagram of a tree

AI-generated content may be incorrect.

**2 6 8 13**

1. Identify all starting positions in the underlying text of Pattern = "adnan".

**4 11**

1. How many leaves will *SuffixTree*("TCTGAGCCCTACTGTCGAGAAATATGTATCTCGCCCCCGCAGCTT$") have?

# leaves = length of genome

**46**

**Week 2**