Worksheet: bad character rule

1. Complete the bad character skip table for the string "AACGT"

Which character is mismatching?

What is the mismatching character in the search string?

	1 A	2 A	3 C	4 G	5 T
A					
C	1	2	0	1	2
G					
T					

2. Fill in the search pattern for the pattern AACGT in the string "TGCAAAACGTAT" using the bad character skip algorithm. How much does this speed up the match compared to linear search?

```
   TGCAAAACGTAT
1) AACGT
2)
```

3. Think of an example where the bad character rule does not help

Worksheet: Good suffix rule

1. Complete the good suffix skip table for the pattern "TAGGAT"

Position of first mismatch	Implied pattern in S	Action
6	^T	Move 1
5	^AT	Move 5
4		
3		
2		
1		

2. Write out the search pattern for the pattern "TAGGAT" in the string "GAGATTATAGGATTACA"

2a. Using the good suffix rule

```
    GAGATTATAGGATTACA
1)  TAGGAT
2)
…
```

2b. Using the bad character rule

```
    GAGATTATAGGATTACA
1)  TAGGAT
2)
…
```

2c. Using both the good suffix and bad character rules

```
    GAGATTATAGGATTACA
1)  TAGGAT
2)
…
```

3. Think of an example where neither the good suffix nor the bad character rule helps