

COM 2001 MOCK ASSIGNMENT 2 SUGGESTED SOLUTIONS

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PART 1

1.1. Specification Completeness

```
isEmpty(pop(push x emptyStack)) == True
```

```
(=> specPop.1)
```

```
isEmpty(emptyStack) == True
```

```
(=> specIsEmpty.1)
```

```
True == True
```

1.2. Implementation Correctness

```
union emptySet s == s
```

```
(=> empty)
```

```
union (MySet []) s == s
```

```
(s == MySet xs)
```

```
union (MySet []) (MySet xs) == s
```

```
(=> union.1)
```

```
MySet (mergeNoDuplicates [] xs) == s
```

```
(=> merge.3)
```

```
MySet xs == s
```

1.3. Subproblem Graph

