

Reasoning Table for removeTwo

Name: _____

To Do:

1. Fill in the reasoning table slots A0, A1, A2, C0, C1, C2 with the correct assertions
2. In the assertions, substitute self for the controlling object and the actual parameter for the formal parameter
3. In the assertions, postpend to the variable its correct state number

```
void removeTwo(SequenceOfT& s, T& z, T& y);
    ///! updates s
    ///! replaces z, y
    ///! requires   |s| > 1
    ///! ensures    s = #s[2,|#s|)  and  <z> is prefix #s  and  <y> is prefix #s[1,|#s|)
```

State	Code	Assume	Confirm
0		A0: $ s_0 > 1$	C0: $0 \leq 1 < s_0 $
	s.remove(1,y);		
1		A1: $\langle y_1 \rangle = s_0[1,2)$ and $s_1 = s_0[0,1) * s_0[2, s_0)$ and $z_1 = z_0$	C1: $0 \leq 0 < s_1 $
	s.remove(0,z);		
2		A2: $\langle z_2 \rangle = s_1[0,1)$ and $s_2 = s_1[0,0) * s_1[1, s_1)$ and $y_2 = y_1$	C2: $s_2 = s_0[2, s_0)$ and $\langle z_2 \rangle$ is prefix s_0 and $\langle y_2 \rangle$ is prefix $s_0[1, s_0)$

Reference:

```
void remove (Integer pos, T& x);
    ///! updates self
    ///! restores pos
    ///! replaces x
    ///! requires:  $0 \leq pos < |self|$ 
    ///! ensures:  $\langle x \rangle = \#self[pos, pos+1)$  and  $self = \#self[0, pos) * \#self[pos+1, |self|)$ 
```