

Alice selects her exponent to be 305, and Bob selects his exponent to be 791. The base is selected to be 2.

```
In[1]:= PowerMod[2, 305,  
2 074 722 246 773 485 207 821 695 222 107 608 587 480 996 474 721 117 292 752 992 589 912 196 684 750 549 \\  
658 310 084 416 732 550 077]
```

```
Out[1]= 65 185 151 242 703 554 760 590 262 029 100 101 153 646 988 597 309 960 020 356 494 379 340 201 592 426 774 \\  
597 868 716 032
```

```
In[2]:= PowerMod[2, 791,  
2 074 722 246 773 485 207 821 695 222 107 608 587 480 996 474 721 117 292 752 992 589 912 196 684 750 549 \\  
658 310 084 416 732 550 077]
```

```
Out[2]= 126 876 606 739 575 619 388 045 621 117 714 258 439 639 281 510 886 882 747 340 090 333 034 546 040 160 \\  
416 641 196 113 549 837 557
```

```
In[3]:= PowerMod[  
65 185 151 242 703 554 760 590 262 029 100 101 153 646 988 597 309 960 020 356 494 379 340 201 592 426 \\  
774 597 868 716 032, 791,  
2 074 722 246 773 485 207 821 695 222 107 608 587 480 996 474 721 117 292 752 992 589 912 196 684 750 549 \\  
658 310 084 416 732 550 077]
```

```
Out[3]= 946 599 839 008 257 950 168 281 462 911 888 869 269 536 243 801 384 661 805 173 001 306 308 175 965 051 \\  
388 763 419 809 163 708 853
```

```
In[4]:= PowerMod[  
126 876 606 739 575 619 388 045 621 117 714 258 439 639 281 510 886 882 747 340 090 333 034 546 040 160 \\  
416 641 196 113 549 837 557, 305,  
2 074 722 246 773 485 207 821 695 222 107 608 587 480 996 474 721 117 292 752 992 589 912 196 684 750 549 \\  
658 310 084 416 732 550 077]
```

```
Out[4]= 946 599 839 008 257 950 168 281 462 911 888 869 269 536 243 801 384 661 805 173 001 306 308 175 965 051 \\  
388 763 419 809 163 708 853
```

```
In[5]:= BaseForm[%, 2]
```

```
Out[5]//BaseForm= 11011101100101010110110110100011001001000101000010100000100011101110111011111100001\  
11000010000111010000111000101101011000010100111100011000001001010111010011111\  
01101111010110010101100111001111000101001110001010001000101011000101000111000\  
01011000100010001111110101000011110101110100001100110110110000101100010001100\  
001001101101012
```