

```
In[9]:= Apply[Times, #] & /@  
      TakeSmallestBy [Select[IntegerPartitions [520, 6, {1, 2, 3, 7, 11, 13, 17, 19, 23, 31, 37,  
      41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97, 101, 103, 107, 109, 113}],  
      Max[Length /@ Split @#] == 1 &], Apply[Times, #] &, 1]
```

```
Out[9]= {11 846 773 891 }
```

```
In[10]:= Apply[Times, #] & /@  
      TakeSmallestBy [Select[IntegerPartitions [390, 5, {1, 2, 3, 7, 11, 13, 17, 19, 23, 31, 37,  
      41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97, 101, 103, 107, 109, 113}],  
      Max[Length /@ Split @#] == 1 &], Apply[Times, #] &, 1]
```

```
Out[10]= {80 393 059 }
```