

# Ph3 Set 6

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5/15/19

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In[69]:= 1 = 2
Out[69]= 2

In[70]:= 1 == 2
Out[70]= False

In[71]:= 1 ≠ 2
Out[71]= True

In[72]:= 1 < 2
Out[72]= True

In[73]:= 1 ≤ 2
Out[73]= True

In[74]:= 1 > 2
Out[74]= False

In[75]:= PrimeQ[9 522 013 840]
Out[75]= False

In[76]:= PrimeQ[2 013 840]
Out[76]= False

In[78]:= FactorInteger[9 522 013 840]
Out[78]= {{2, 4}, {5, 1}, {41, 1}, {1063, 1}, {2731, 1}}
```

```
In[79]:= isPrime[x_] := If[IntegerQ[x], If[PrimeQ[x],
    Print["Yeah this is a prime"], FactorInteger[x]], Print["Not an integer"]]

In[81]:= isPrime[Prime[4000]]
Yeah this is a prime

In[82]:= isPrime[9 522 013 840]
Out[82]= {{2, 4}, {5, 1}, {41, 1}, {1063, 1}, {2731, 1}}
```