In [2]:

```
# import what you need for numerical arrays and pretty plots
import numpy as np
import matplotlib.pyplot as plt
import pandas as pd
import seaborn as sns
```

In [3]:

```
# create arrays for your means and SDs values
distMeans = [5, 7, 9, 11, 13]
distStd = [2, 4, 6, 8, 10]

dist1Array = [5, 2]
dist2Array = [7, 4]
dist3Array = [9, 6]
dist4Array = [11, 8]
dist5Array = [13, 10]
```

In [4]:

```
# create the distributions and store them
# into a single numpy array 'dist'

nData = 1000
dist = np.zeros((nData, 5))
numOfMeans = len(distMeans)

for i in range(numOfMeans):
    dist[:,i] = distMeans[i] + np.random.randn(nData)*distStd[i]

np.mean(dist, axis=0)
```

Out[4]:

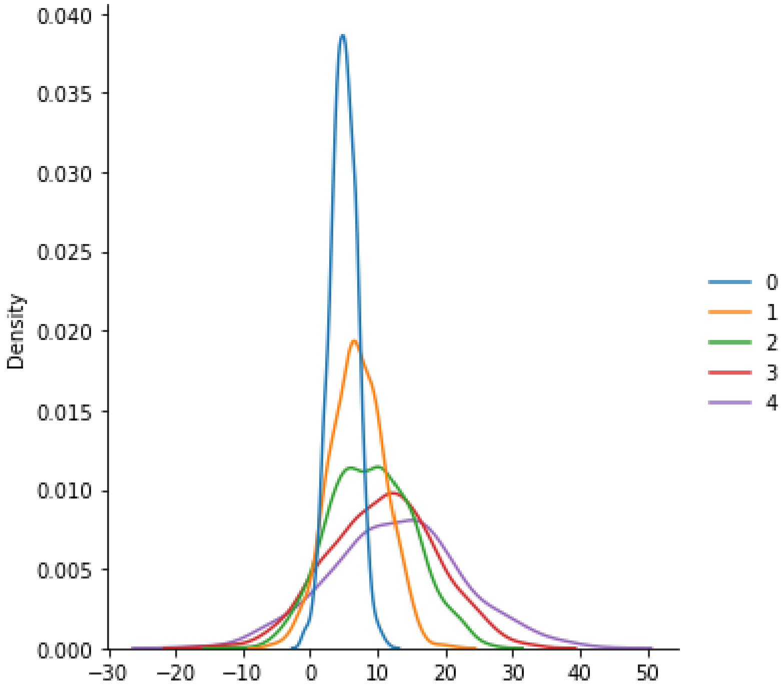
```
array([ 4.95105759,  6.98100081,  9.07740744, 10.7259736 , 12.72799456])
```

In [5]:

```
sns.displot(dist, kind='kde')
```

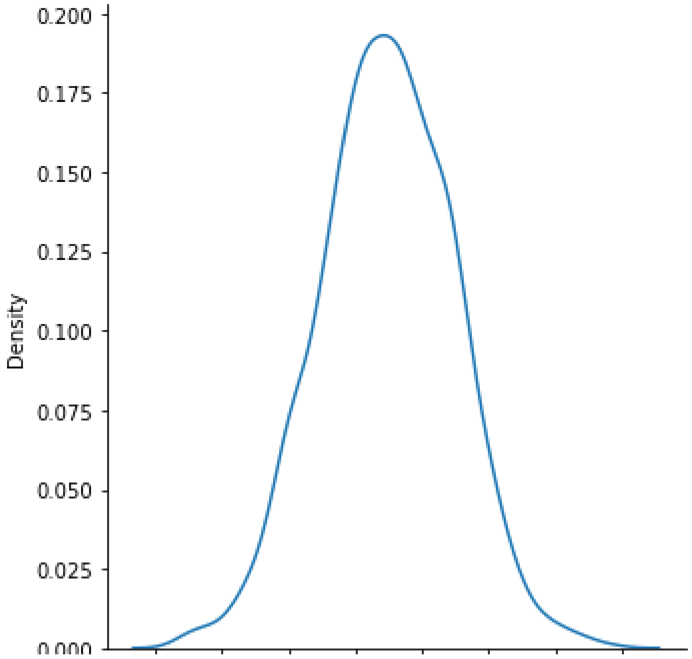
Out[5]:

```
<seaborn.axisgrid.FacetGrid at 0x1ba87c3fcd0>
```



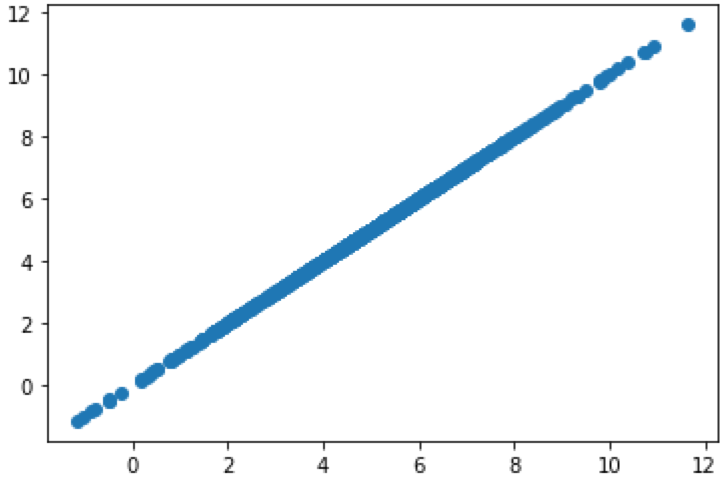
In [14]:

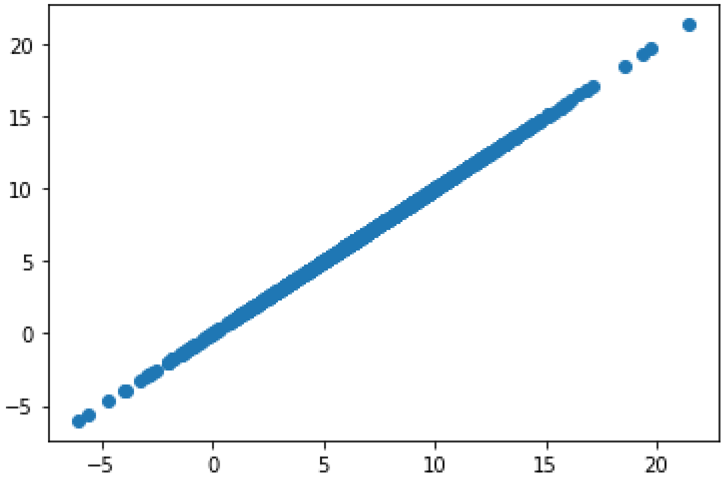
```
# Plot the KDE plots of the distributions in multiple subplots
#
# hint: you might need to use zip() to return two counters as a tuple
#       zip(my_index_vals, my_axis_vals)
#       https://docs.python.org/3/library/functions.html#zip

for i in range(numOfMeans):
    sns.displot(dist[:,i], kind="kde")
```

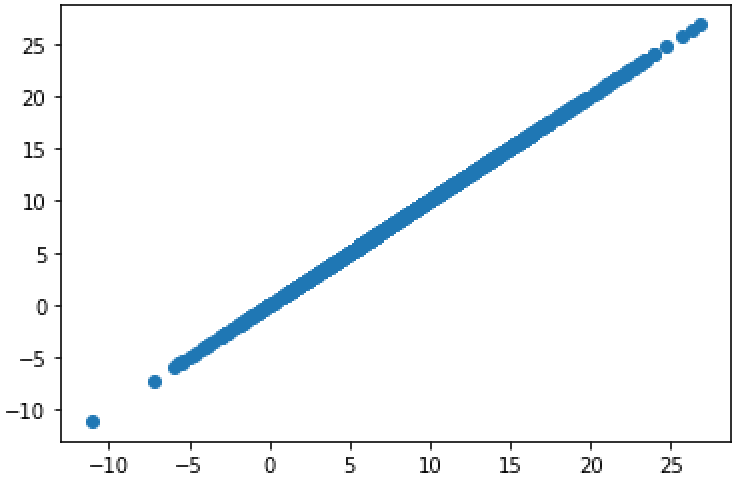


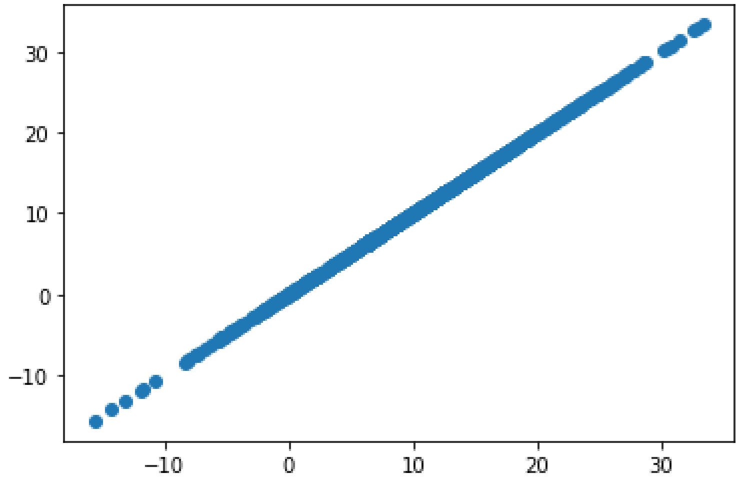
In [12]:

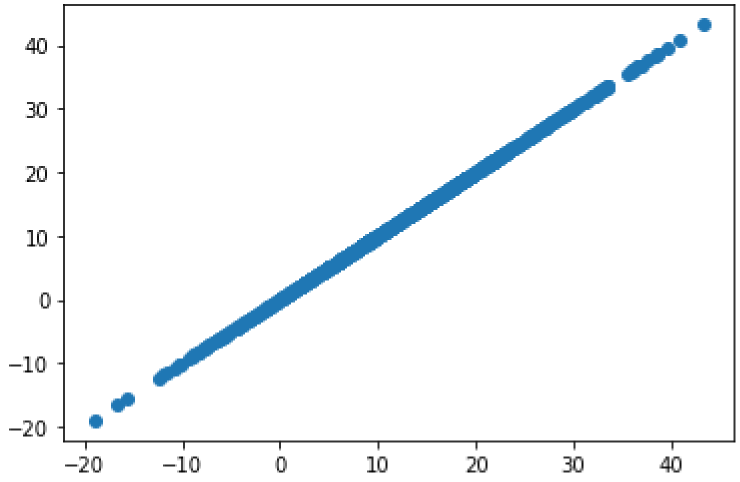
```
for i in range(numOfMeans):
    plt.scatter(x=dist[:,i], y=dist[:,i])
    plt.pause(0.05)
```











```
In [ ]:
```