Answer 1.

```
from scipy.stats import norm
mean = 175
deviation = 8
max_height = 185
z_score= (max_height - mean)/deviation
taller = 1-norm.cdf(z_score)
percentage = taller*100
print("males taller than",max_height,percentage)
```

```
PS C:\Users\hackt\Desktop\DA> & c:/Users/hackt/Desktop/DA/my_venv/Scripts/python.exe
"c:/Users/hackt/Desktop/DA/A2 1.py"
males taller than 185 10.564977366685536
```

Answer 2.

```
from scipy.stats import norm
percentile = 90
z_score = norm.ppf(percentile/100)
print(z_score)
```

```
PS C:\Users\hackt\Desktop\DA> & c:/Users/hackt/Desktop/DA/my_venv/Scripts/python.exe
"c:/Users/hackt/Desktop/DA/A2 2.py"
1.2815515655446004
```

Answer 3.

```
import scipy.stats as s
mean = 120
deviation = 15
z_score= (140 - mean)/deviation
probability = 1-s.norm.cdf(z_score)
percentage = probability*100
print(f"The percentage of birds that weights more
than 140gm is, {percentage:.2f}%")
```

```
PS C:\Users\hackt\Desktop\DA> & c:/Users/hackt/Desktop/DA/my_venv/Scripts/python.exe
"c:/Users/hackt/Desktop/DA/A2 3.py"
The percentage of birds that weights more than 140gm is, 9.12%
```

Answer 4.

```
mean = 70
deviation = 5
score = 80
z_score = (score - mean)/deviation
print(z_score)
```

```
PS C:\Users\hackt\Desktop\DA> & c:/Users/hackt/Desktop/DA/my_venv/Scripts/python.exe
"c:/Users/hackt/Desktop/DA/A2 4.py"
2.0
```

Answer 5.

```
from scipy.stats import norm
mean = 100
deviation = 15
z_score_85 = (85-mean)/deviation
z_score_115 = (115-mean)/deviation
portion_between = norm.cdf(z_score_115) -
norm.cdf(z_score_85)
print(portion_between)
```

```
PS C:\Users\hackt\Desktop\DA> & c:/Users/hackt/Desktop/DA/my_venv/Scripts/python.exe
"c:/Users/hackt/Desktop/DA/A2 5.py"
0.6826894921370859
```