

Challenge 1 Answer Key

1. Create the following scatterplot using ggplot(). (5 points)

```
ggplot(NHANES, aes(Age, BMI)) + geom_point()
```

2 Points: Age first

2 Points: BMI second

1 Point: geom_point() (take off 2 points if variables switched)

2. Create the following more decorated scatterplot using ggplot(). (5 points)

```
ggplot(NHANES, aes(Age, BMI, color = Gender)) + ggtitle("BMI given Age") +  
  xlab("Age in Years") + ylab("Body Mass Index") + geom_point()
```

1 point: Same variables last time

1 point: Color by Gender

1 point: X-axis labels

1 point: Y-axis label

1 point: Title (take off 0.5 for any minor errors)

3. Create the following even more decorated scatterplot using ggplot(). (10 points)

```
ggplot(NHANES, aes(Age, BMI)) + facet_grid(Gender~Education) + geom_point() + ggtitle("BMI given Age fa  
  geom_smooth(aes(Age, BMI))
```

2 points: Same variables & geom_point() 2 points: Facet by Gender

2 points: Facet by Education

1 point: geom_smooth()

1 point: Title

1 point: X-axis label

1 point: Y-axis label

(take off 0.5 for any minor error)