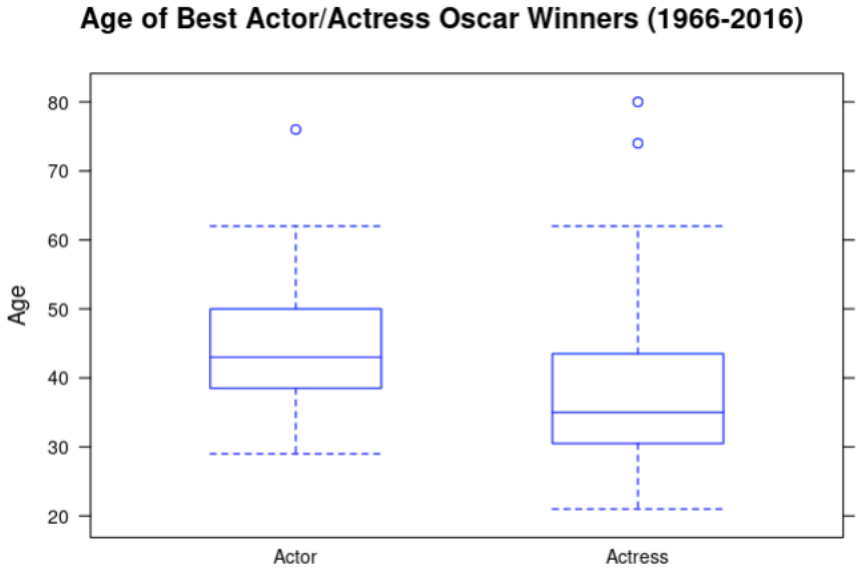
Name:_____ Date:_____

Ages of Oscar Winners

Background:

The set of boxplots shown below represent the ages of actors and actresses who have been awarded an Oscar for Best Actor/Actress. The data include 51 male actors and 51 female actresses that won the prestigious award between the years 1966 and 2016.



1. Record the five-number summary for each sex.

Actors	**Actresses**
Minimum: _____	Minimum: _____
Q_1: _____	Q_1: _____
Median: _____	Median: _____
Q_3: _____	Q_3: _____
Maximum: _____	Maximum: _____

2. Which sex shows more variability in the ages of the winners? Explain using appropriate measures.

3. What other statistical investigative questions can you think of based on these plots? Is there anything surprising about the differences between sexes that could be worth exploring?

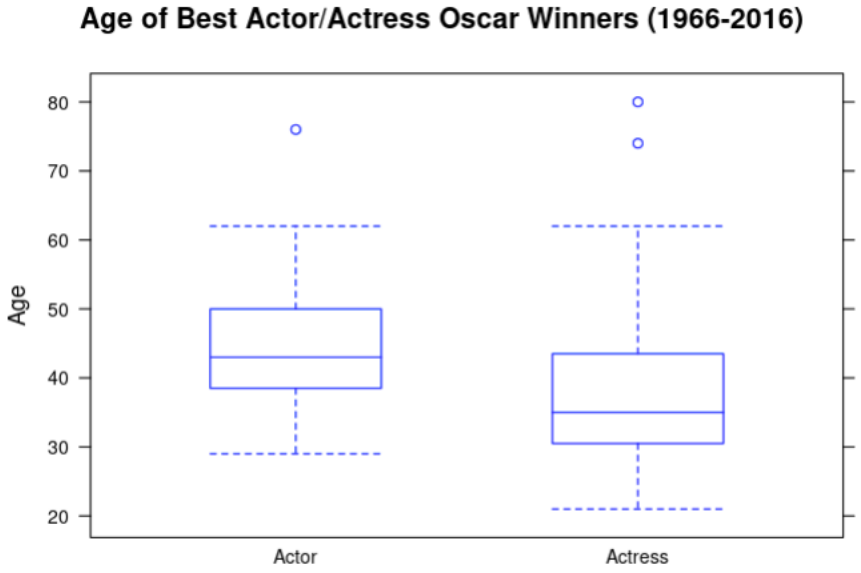
Name:_____ Date:_____

Ages of Oscar Winners

Answer Key

Background:

The set of boxplots shown below represent the ages of actors and actresses who have been awarded an Oscar for Best Actor/Actress. The data include 51 male actors and 51 female actresses that won the prestigious award between the years 1966 and 2016.



1. Record the five-number summary for each sex.

Actors		**Actresses**	
Minimum:	*29*	Minimum:	*21*
Q_1:	*38.5*	Q_1:	*30.5*
Median:	*43*	Median:	*35*
Q_3:	*50*	Q_3:	*43.5*
Maximum:	*76*	Maximum:	*80*

2. Which sex shows more variability in the ages of the winners? Explain using appropriate measures.

   If we use the range as a measure of spread, then the female actresses show more variability since the youngest actress was 21 and the oldest was 80, which is a difference of 59 years compared to the range of male actors which was only 47 years. If we use the IQR as a measure of spread, then we can say that there was more variability in the age of female actors since the middle 50% of female Oscar winners were within 13 years difference compared to males, which displayed an 11.5-year difference. In this case the IQR is a more reliable measure of spread since it measures the spread in the middle 50% of the data and is less affected by extreme values in the data. However, both measures of spread give evidence of females Oscar winners having more variability in their ages.

3. What other statistical investigative questions can you think of based on these plots? Is there anything surprising about the differences between sexes that could be worth exploring?

   Answers will vary but a possible statistical investigative question might be: Are female Oscar winners typically younger than male Oscar winners?