

Warm Up	Week 2, Lesson 1
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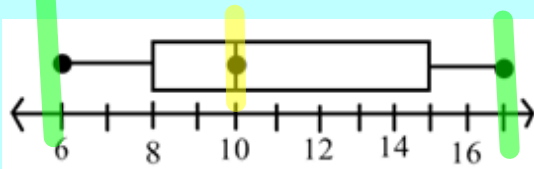
Essential Question Essential Question Essential Question Essential Question Essential Question Essential Question Essential Question

**EQ:** Can I compare measures of center and spread of data? (S-ID.2)

Essential Question Essential Question Essential Question Essential Question Essential Question Essential Question Essential Question

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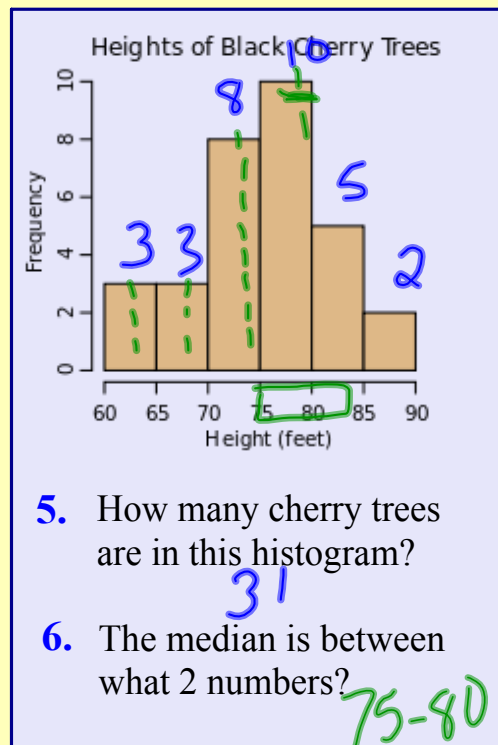
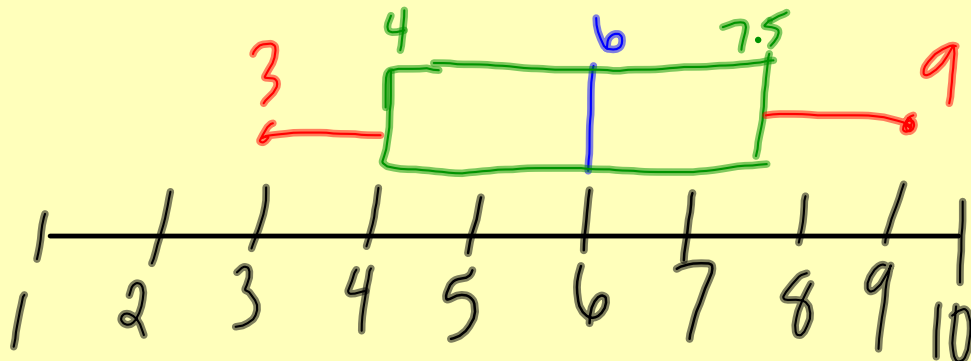
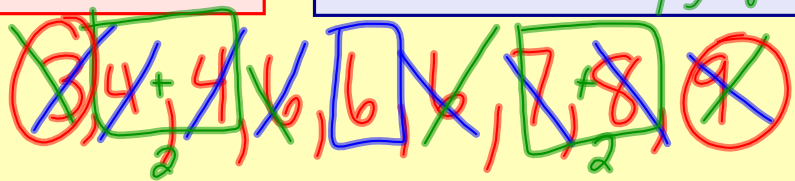
**Warm-up:** Answer the following questions.



1. Can you find the mean? If so, what is it?  
*Cannot Find*
2. Can you find the median? If so, what is it?  
*10*
3. Can you find the mode? If so, what is it?  
*Cannot Find*
4. Can you find the range? If so, what is it?  
*17 - 6 = 11*

7. Make a box-and-whisker plot

*{4, 6, 8, 3, 9, 6, 7, 6, 4}*



5. How many cherry trees are in this histogram?  
*31*
6. The median is between what 2 numbers?  
*75-80*

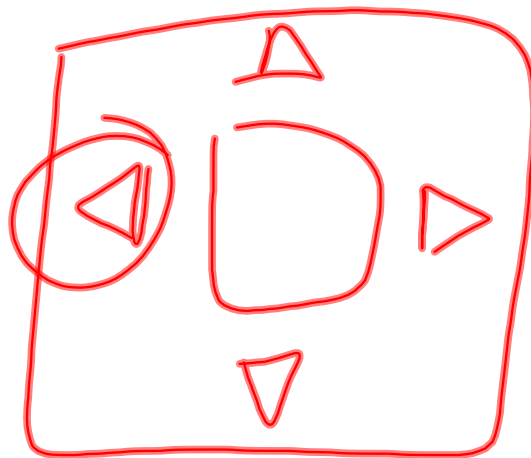


Page 11

- ① New Doc
  - Add Lists & Spreadsheets
- ② Write Labels in A & B
- ③ Do NOT write on the diamond
- ④ Type in Numbers

Mean(boy)

Ctrl

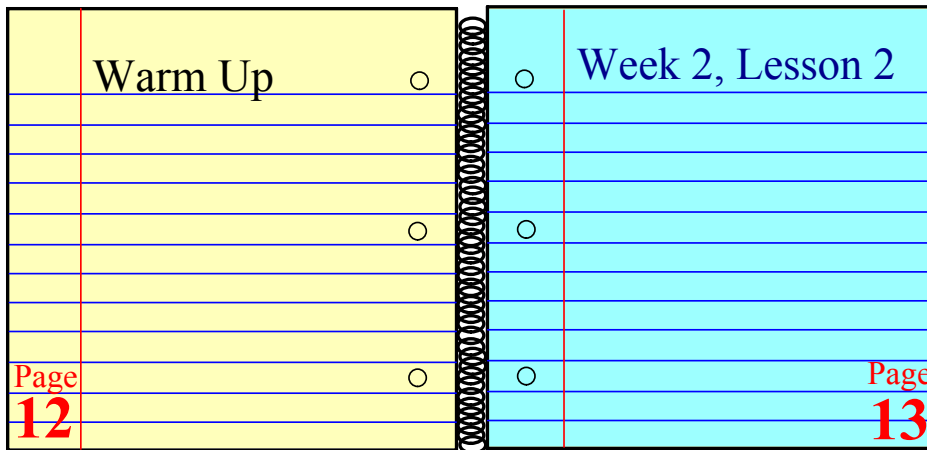


ALG 2 - Week 2

	boy	girl	c
1	10.5	7.5	
2	10.5	9	
3	10	8	
4	10	8	
5	9.5	7	
6	10	9	
7	11	8.5	







Essential Question	Essential Question	Essential Question	Essential Question	Essential Question	Essential Question	Essential Question	Essential Question
<b><i>EQ:</i></b> How do outliers affect the shape, center and spread of data? (S-ID.3)							
Essential Question	Essential Question	Essential Question	Essential Question	Essential Question	Essential Question	Essential Question	Essential Question
Warm-up	Warm-up	Warm-up	Warm-up	Warm-up	Warm-up	Warm-up	Warm-up

Warm-up:

# ***S-ID.1* and *S-ID.2* QUIZ**

Mean

- ① Add all #'s    ② Take that # and  $\div$   $\textcircled{8}$  ← Amount of numbers added

90  
87  
85  
+ 92  
88  
79  
94  
92

$$\frac{707}{8}$$

88.375%

---

707

Median: (middle)

In order:

~~79~~, ~~85~~, ~~87~~, ~~88~~, ~~90~~, ~~92~~, ~~92~~, ~~94~~

2

Median = 89

Mode = Most = 92

Range: Big - Small

↓                  ↓

94 - 79 = 15



Mean:

$$\begin{array}{r}
 90 \\
 87 \\
 8 \\
 92 \\
 + 88 \\
 79 \\
 94 \\
 92 \\
 \hline
 \end{array}$$

$$\frac{630}{8} = 78.75\%$$

---

 630
 

---

Median:

~~8, 79, 87, 88, 90, 92, 92, 94~~

Median: 89

Mode: 92

 Range:  $94 - 8 = 86$

## Outliers & Standard Deviation

S-ID.3

**Outlier:** *Is the number that is the "outsider". The number does not seem to fit the rest of the data.*

### Standard Deviation:

The average distance between the data and the mean.

Finding standard deviation with the calculator:

1. Make a list
2. Add Calculator
3. Press Menu, Statistics, Stat Calculations, One Var. Stats
4. # of lists = 1... x1 list = column name
5. Press Enter

"Title"	"One-Variable Statistics"
" $\bar{x}$ "	6.54545
" $\Sigma x$ "	72.
" $\Sigma x^2$ "	574.
" $s_x := s_{n-1}x$ "	3.20511
" $\sigma_x := \sigma_{n-1}x$ "	3.05595
"n"	11.

standard deviation →

### *Examples:*

{4, 5, 4, 3, 4, 5, 6, 4}

{4, 11, 2, 26, 5, 10, 9, 2}

mean: 4.375  
 standard deviation: 0.856957

mean: 8.625  
 standard deviation: 7.34741

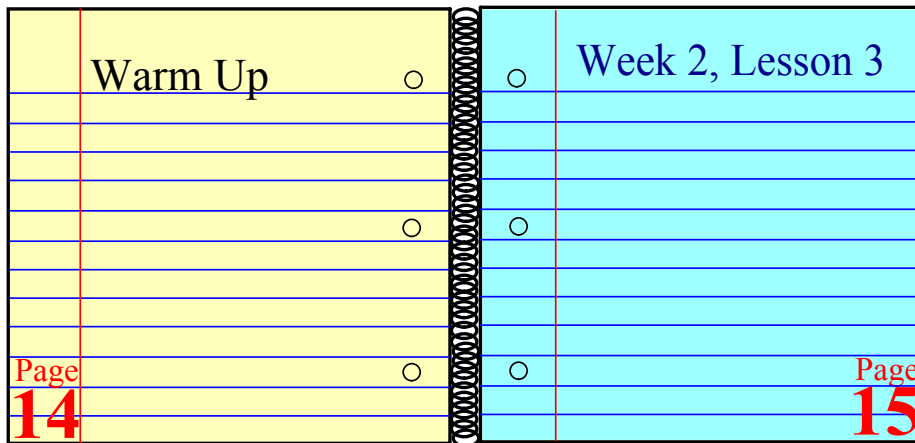
Outliers affect:

1. Standard deviation
2. Mean
3. Range

Summary:







Essential Question	Essential Question	Essential Question	Essential Question	Essential Question	Essential Question	Essential Question	Essential Question
<b>EQ:</b> How do outliers affect the shape, center and spread of data? (S-ID.3 & S-ID.5)							
Essential Question	Essential Question	Essential Question	Essential Question	Essential Question	Essential Question	Essential Question	Essential Question
Warm-up	Warm-up	Warm-up	Warm-up	Warm-up	Warm-up	Warm-up	Warm-up

Warm-up:

1. Update grade graph (pg. 4)
2. Questions on quizzes

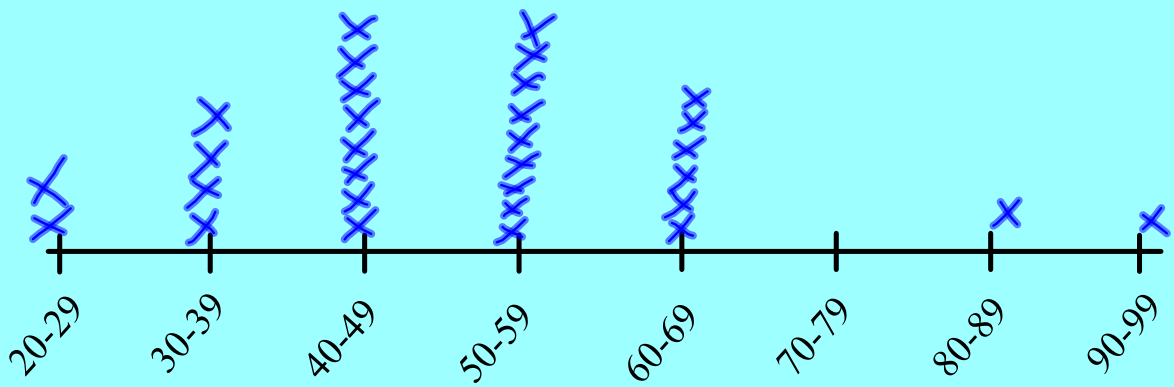
## Dot Plots & Skewed Data

S-ID.3

Ages for 100 U.S. Senators in 2011 are shown below.

Age	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99
Frequency	2	4	8	9	6	0	1	1

Create a dot plot of the data:



**Skewed to the Left**

```

                X
              X X
            X X X X
          X X X X
        ←————→
    
```

**Symmetric**

```

                X
              X X X
            X X X X X
          X X X X X X X
        ←————→
    
```

**Skewed to the Right**

```

                X
              X X
            X X X X
          X X X X
        ←————→
                X X
    
```

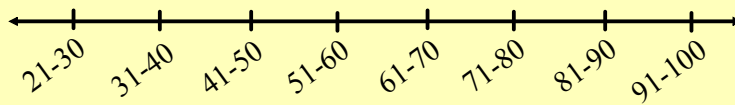
Summary:



**ICA:** The following table shows a group of students' quiz scores.

34	76	89	58	95
74	81	52	98	74
72	71	64	68	22

1. Make a dot plot. (How could we easily turn this into a histogram?)



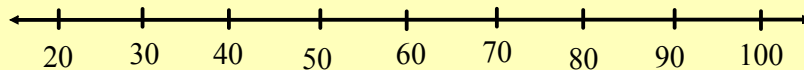
2. Find

mean: \_\_\_\_\_  
 median: \_\_\_\_\_  
 mode: \_\_\_\_\_  
 range: \_\_\_\_\_  
 standard deviation: \_\_\_\_\_

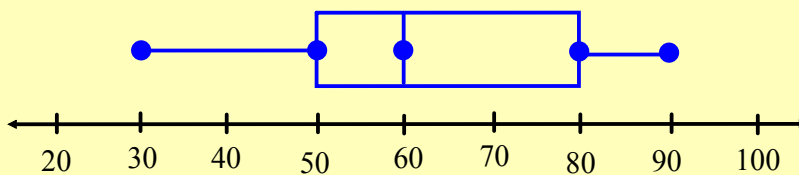
3. Is there an outlier? If so, what is it?

4. Explain how the outlier affects mean and standard deviation.

5. Make a box-and-whisker plot that represents the data.



6. Compare the box-and-whisker plot above to another class' data below.

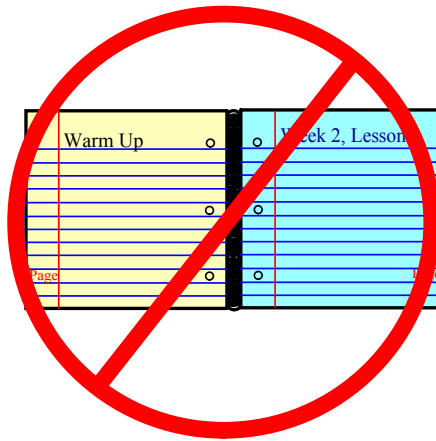


- a. Who has a higher median?  
 b. Who has a smaller range?





ASU Visit



Essential Question    Essential Question    Essential Question    Essential Question    Essential Question    Essential Question    Essential Question

***EQ:***

Essential Question    Essential Question    Essential Question    Essential Question    Essential Question    Essential Question    Essential Question

Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up

## ALG 2 - Unit 4 Test Review.doc

The kids should do questions 1 - 10. That should be enough but we may want to leave a fun activity for extra credit in case they finish early.

## Attachments

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ALG 2 - S-ID.1 Recovery Quiz.docx

ALG 2 - S-ID.2 Recovery Quiz.docx

ALG 2 - S-ID.3 Activity.docx

ALG 2 - Unit 4 Test Review.doc