

Name: Arissa

Problem solving task 6.14

Your friend Robert (from last class) and his family definitely don't want to move to New York or San Francisco anymore due to rent prices. He is now considering Pittsburgh and Portland. Remember, he wants weather that is fairly consistent. He will use the data below to help him make his decision.

Pittsburgh, PA

Lowest 25% of average monthly temperatures	37-45.5 degrees
Lower 25% of average monthly temperatures	45.5-63 degrees
Upper 25% of average monthly temperatures	63-77 degrees
Highest 25% of average monthly temperatures	77-83 degrees

$$\begin{array}{r} 34.5 \\ - 37.0 \\ \hline 8.5 \end{array}$$

Portland, OR

Lowest 25% of average monthly temperatures	56-60 degrees
Lower 25% of average monthly temperatures	60-62 degrees
Upper 25% of average monthly temperatures	62 to 65 degrees
Highest 25% of average monthly temperatures	65 to 69 degrees

$$\begin{array}{r} 56 \\ - 56 \\ \hline 4 \end{array}$$

Why is having this summary of data more helpful for Robert than just having the mean temperature for each city?

So that Robert can see if there is some sort of consistency in the weather all year round. The mean wouldn't because it tells us the middle point (kinda) but not consistency.

Based on this data and Robert's desire to live in a place with fairly consistent weather, where should he move?

Portland, OR because even the lowest averages of monthly temperatures are smaller to highest averages of the monthly temperature.

Keep in notebook

Amissa

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

Even number of data points

1) Put the data in order.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

2) Find the minimum and the maximum

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

3) Find the median

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

4) Find the median of the lower half. This is called Q1 or the Lower Quartile.

Pittsburgh $\frac{34+36}{2} = 35$ 39 43 60 60 62 74 74 80 81 83

5) Find the median of the upper half. This is called Q3 or the Upper Quartile.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

6) Find the difference between Q3 and Q1 to find the interquartile range.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

minimum: 34
 maximum: 83
 median: 61

$IQR = Q3 - Q1$

$\frac{77}{-41}$
 $IQR = 36$

difference
 at Q1 → Q3: 77
 IQR

break things in 4 parts

$\frac{154}{2} = 77$

$\frac{122}{2} = 61$

$\frac{82}{2} = 41$

$\frac{154}{2} = 77$

Ariisa

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

ODD number of data points

7) Put the data in order.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

minimum

maximum

8) Find the minimum and the maximum

L.A. ~~56~~ ~~58~~ ~~59~~ ~~60~~ ~~61~~ ~~62~~ 63 ~~64~~ ~~65~~ ~~66~~ ~~68~~ ~~69~~ ~~72~~

9) Find the median

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

10) Find the median of the lower half. Do NOT include the median when you are counting. This is called Q1 or the Lower Quartile.

L.A. ~~56~~ ~~58~~ 59 60 ~~61~~ ~~62~~ ~~63~~ ~~64~~ ~~65~~ ~~66~~ ~~68~~ ~~69~~ ~~72~~

59.5

134 = 67

067
2 | 134
- 120
14
- 14
0

11) Find the median of the upper half. Do NOT include the median when you are counting. This is called Q3 or the Upper Quartile.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

12) Find the difference between Q3 and Q1 to find the interquartile range.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

minimum: 56
maximum: 72
median: 63
Q1: 59.5
Q3: 67
IQR: 7.5

16
~~6~~
567.0
- 59.5

7.5

Name: Edison

Problem solving task 6.14

Your friend Robert (from last class) and his family definitely don't want to move to New York or San Francisco anymore due to rent prices. He is now considering Pittsburgh and Portland. Remember, he wants weather that is fairly consistent. He will use the data below to help him make his decision.

Pittsburgh, PA

Lowest 25% of average monthly temperatures	37-45.5 degrees
Lower 25% of average monthly temperatures	45.5-63 degrees
Upper 25% of average monthly temperatures	63-77 degrees
Highest 25% of average monthly temperatures	77-83 degrees

Portland, OR

Lowest 25% of average monthly temperatures	56-60 degrees
Lower 25% of average monthly temperatures	60-62 degrees
Upper 25% of average monthly temperatures	62 to 65 degrees
Highest 25% of average monthly temperatures	65 to 69 degrees

Why is having this summary of data more helpful for Robert than just having the mean temperature for each city?

The reason it is better having a data summary is because it can show how the weather is changing overtime and

Based on this data and Robert's desire to live in a place with fairly consistent weather, where should he move?

He should move to portland

now it is being raised up

Edison

Keep in notebook

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

Even number of data points

1) Put the data in order.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

2) Find the minimum and the maximum

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83
↑ min ↑ max

3) Find the median

Pittsburgh ~~34~~ ~~36~~ ~~39~~ ~~43~~ ~~60~~ (60 62) ~~74~~ ~~74~~ ~~80~~ ~~81~~ ~~83~~

4) Find the median of the lower half. This is called Q1 or the Lower Quartile.

Pittsburgh ~~34~~ ~~36~~ (39 43) ~~60~~ ~~60~~ 62 74 74 80 81 83

5) Find the median of the upper half. This is called Q3 or the Upper Quartile.

Pittsburgh 34 36 39 43 60 60 ~~62~~ ~~74~~ (74 80) ~~81~~ ~~83~~

6) Find the difference between Q3 and Q1 to find the interquartile range.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

min: 34

max: 83

$Q1: 39 + 43 = 82 \div 2 = 41$

$Q3: 74 + 80 = 154 \div 2 = 77$

median: $60 + 62 = 122 \div 2 = 61$

$$\begin{array}{r} 61 \\ 2 \overline{)122} \\ \underline{-12} \\ 0 \end{array}$$

$IQR = Q3 - Q1$

$$\begin{array}{r} 77 \\ -41 \\ \hline 36 \end{array}$$

$$\begin{array}{r} 61 \\ 2 \overline{)122} \\ \underline{-12} \\ 0 \end{array}$$

Edison

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

ODD number of data points

7) Put the data in order.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

8) Find the minimum and the maximum

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

9) Find the median

L.A. ~~56~~ ~~58~~ ~~59~~ ~~60~~ ~~61~~ ~~62~~ (63) ~~64~~ ~~65~~ ~~66~~ ~~68~~ ~~69~~ ~~72~~

10) Find the median of the lower half. Do NOT include the median when you are counting. This is called Q1 or the Lower Quartile.

L.A. ~~56~~ ~~58~~ (59) (60) ~~61~~ ~~62~~ 63 64 65 66 68 69 72

11) Find the median of the upper half. Do NOT include the median when you are counting. This is called Q3 or the Upper Quartile.

L.A. 56 58 59 60 61 62 63 ~~64~~ ~~65~~ (66) (68) ~~69~~ ~~72~~

12) Find the difference between Q3 and Q1 to find the interquartile range.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

Min: 56

Max: 72

Q3: $66 + 68 = 134 \div 2 = 67$

Q1: $59 + 60 = 119 \div 2 = 59.5$

median: 63

IQR: $134 - 119$

$$\begin{array}{r} 134 \\ -119 \\ \hline 15 \end{array}$$

$$\begin{array}{r} 66 \\ +68 \\ \hline 134 \end{array}$$

$$\begin{array}{r} 067 \\ 2 \overline{)134} \\ -12 \\ \hline 14 \\ -14 \\ \hline 0 \end{array}$$

Jaman

Name: Joseph 9/1/19

Problem solving task 6.14

Your friend Robert (from last class) and his family definitely don't want to move to New York or San Francisco anymore due to rent prices. He is now considering Pittsburgh and Portland. Remember, he wants weather that is fairly consistent. He will use the data below to help him make his decision.

Pittsburgh, PA

Lowest 25% of average monthly temperatures	37-45.5 degrees
Lower 25% of average monthly temperatures	45.5-63 degrees
Upper 25% of average monthly temperatures	63-77 degrees
Highest 25% of average monthly temperatures	77-83 degrees

not changing alot

Lowest 37

Highest 83

37 - 45.5

45.5 - 63

63 - 77

77 - 83

83
- 37
46 Range

Portland, OR

Lowest 25% of average monthly temperatures	56-60 degrees
Lower 25% of average monthly temperatures	60-62 degrees
Upper 25% of average monthly temperatures	62 to 65 degrees
Highest 25% of average monthly temperatures	65 to 69 degrees



Lowest 56

Highest 69

69
56
13 Range

Why is having this summary of data more helpful for Robert than just having the mean temperature for each city?

It's more helpful because the mean is talking about average but the range shows us the distance between highest to lowest.

Based on this data and Robert's desire to live in a place with fairly consistent weather, where should he move?

He should move to Pittsburgh because the range is 46

Jamar 4/1/19

Keep in notebook

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

Even number of data points

1) Put the data in order.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

2) Find the minimum and the maximum

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

3) Find the median

Pittsburgh ~~34~~ ~~36~~ ~~39~~ ~~43~~ ~~60~~ 60 62 ~~74~~ ~~74~~ ~~80~~ ~~81~~ ~~83~~

$$\frac{60+62}{2} = \frac{122}{2} = 61$$

4) Find the median of the lower half. This is called Q1 or the Lower Quartile.

Pittsburgh ~~34~~ ~~36~~ 39 43 ~~60~~ ~~60~~ 62 74 74 80 81 83

$$\frac{39+43}{2} = \frac{82}{2} = 41$$

5) Find the median of the upper half. This is called Q3 or the Upper Quartile.

Pittsburgh 34 36 39 43 60 60 ~~62~~ ~~74~~ 74 80 ~~81~~ ~~83~~

$$\frac{80+81}{2} = \frac{161}{2} = 80.5$$

6) Find the difference between Q3 and Q1 to find the interquartile range.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

The minimum: 34
Maximum: 83
Median: ~~61~~ 61

$$IQR = Q3 - Q1 = 36$$

Q1: 41
Q3: 77

$$\begin{array}{r} 77 \\ -41 \\ \hline 36 \end{array}$$

$$\begin{array}{r} 43 \\ 39 \\ \hline 82 \\ \hline 80.5 \end{array}$$

Jamar ~~4/1/19~~

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

ODD number of data points

7) Put the data in order.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

8) Find the minimum and the maximum

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

9) Find the median

L.A. ~~56~~ ~~58~~ ~~59~~ 60 ~~61~~ ~~62~~ 63 ~~64~~ ~~65~~ ~~66~~ ~~68~~ ~~69~~ ~~72~~

10) Find the median of the lower half. Do NOT include the median when you are counting. This is called Q1 or the Lower Quartile.

L.A. ~~56~~ ~~58~~ 59 60 ~~61~~ ~~62~~ 63 64 65 66 68 69 72

11) Find the median of the upper half. Do NOT include the median when you are counting. This is called Q3 or the Upper Quartile.

L.A. 56 58 59 60 61 62 ~~63~~ ~~64~~ ~~65~~ 66 68 ~~69~~ ~~72~~ ~~71~~

12) Find the difference between Q3 and Q1 to find the interquartile range.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72 1

Minimum: 56

Maximum: 72

Median: 63

~~Q1~~
Q1: 59.5
Q3: 67

$IQR = 7.5$

~~63.0~~
~~59.5~~

60
+ 59

119

68
+ 66

134

067
2 | 134
 12

 14
 14

 00

Name: Lain Nguyen

Problem solving task 6.14

Your friend Robert (from last class) and his family definitely don't want to move to New York or San Francisco anymore due to rent prices. He is now considering Pittsburgh and Portland. Remember, he wants weather that is fairly consistent. He will use the data below to help him make his decision.

Pittsburgh, PA

Lowest 25% of average monthly temperatures	37-45.5 degrees
Lower 25% of average monthly temperatures	45.5-63 degrees
Upper 25% of average monthly temperatures	63-77 degrees
Highest 25% of average monthly temperatures	77-83 degrees

Range: 46

Portland, OR

Lowest 25% of average monthly temperatures	56-60 degrees
Lower 25% of average monthly temperatures	60-62 degrees
Upper 25% of average monthly temperatures	62 to 65 degrees
Highest 25% of average monthly temperatures	65 to 69 degrees

Range: 13

Why is having this summary of data more helpful for Robert than just having the mean temperature for each city?

It's more helpful for Robert because the mean helps us find the midpoint

Based on this data and Robert's desire to live in a place with fairly consistent weather, where should he move?

He should move to Portland, OR because

LOU

Keep in notebook

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

Even number of data points

1) Put the data in order.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

2) Find the minimum and the maximum

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

3) Find the median

Pittsburgh ~~34~~ ~~36~~ ~~39~~ ~~43~~ ~~60~~ (60 62) ~~74~~ ~~74~~ ~~80~~ ~~81~~ ~~83~~

$\frac{60+62}{2} = 61$

4) Find the median of the lower half. This is called Q1 or the Lower Quartile.

Pittsburgh ~~34~~ ~~36~~ (39 43) ~~60~~ ~~60~~ 62 74 74 80 81 83

41

5) Find the median of the upper half. This is called Q3 or the Upper Quartile.

Pittsburgh 34 36 39 43 60 60 ~~62~~ ~~74~~ 74 80 ~~81~~ ~~83~~

$\frac{74+80}{2} = 77$

6) Find the difference between Q3 and Q1 to find the interquartile range.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

minimum: 34

maximum: 83

median: 61

Q1: 41

Q3: 77

$IQR = Q3 - Q1 = 36$

$IQR = 41 - 77$

$\frac{77-41}{1} = 36$

$\frac{39+43}{2} = 41$

Laibiga

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

ODD number of data points

7) Put the data in order.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

8) Find the minimum and the maximum

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

9) Find the median

L.A. ~~56~~ ~~58~~ ~~59~~ ~~60~~ ~~61~~ ~~62~~ 63 ~~64~~ ~~65~~ ~~66~~ ~~68~~ ~~69~~ 72

10) Find the median of the lower half. Do NOT include the median when you are counting. This is called Q1 or the Lower Quartile.

L.A. ~~56~~ ~~58~~ 59 60 ~~61~~ ~~62~~ 63 64 65 66 68 69 72

11) Find the median of the upper half. Do NOT include the median when you are counting. This is called Q3 or the Upper Quartile.

L.A. 56 58 59 60 ~~61~~ ~~62~~ 63 ~~64~~ ~~65~~ 66 68 ~~69~~ ~~72~~

12) Find the difference between Q3 and Q1 to find the interquartile range.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

Handwritten calculations for Q1:
$$\begin{array}{r} 0.595 \\ 2110.0 \\ - 110 \\ \hline 2000 \\ - 1000 \\ \hline 1000 \end{array}$$

Handwritten calculations for Q3:
$$\begin{array}{r} 50 \\ 160 \\ - 110 \\ \hline 50 \end{array}$$

Handwritten calculations for Q3:
$$\begin{array}{r} 66 \\ 067 \\ - 34 \\ \hline 33 \end{array}$$

Min: 56

Max: 72

Median: 63

Q1: 59.5

Q3: 67

IQR: 7.5

Handwritten calculation for IQR:
$$\begin{array}{r} .16 \\ 6 \\ 567.10 \\ - 59.5 \\ \hline 7.5 \end{array}$$

Name: Patricia

Problem solving task 6.14

Your friend Robert (from last class) and his family definitely don't want to move to New York or San Francisco anymore due to rent prices. He is now considering Pittsburgh and Portland. Remember, he wants weather that is fairly consistent. He will use the data below to help him make his decision.

Pittsburgh, PA

Lowest 25% of average monthly temperatures	37-45.5 degrees
Lower 25% of average monthly temperatures	45.5-63 degrees
Upper 25% of average monthly temperatures	63-77 degrees
Highest 25% of average monthly temperatures	77-83 degrees

Range:
46

$$\begin{array}{r} 78313 \\ - 37 \\ \hline 46 \end{array}$$

Portland, OR

Lowest 25% of average monthly temperatures	56-60 degrees
Lower 25% of average monthly temperatures	60-62 degrees
Upper 25% of average monthly temperatures	62 to 65 degrees
Highest 25% of average monthly temperatures	65 to 69 degrees

Range:

$$\begin{array}{r} 69 \\ - 56 \\ \hline 13 \end{array}$$

Why is having this summary of data more helpful for Robert than just having the mean temperature for each city?

helps us find
The mean ~~to be~~ center point and it
doesn't help us find ~~the~~ the range

Based on this data and Robert's desire to live in a place with fairly consistent weather, where should he move?

Portland

Patricia

Keep in notebook

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

Even number of data points

1) Put the data in order.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

2) Find the minimum and the maximum

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

3) Find the median

Pittsburgh ~~34~~ ~~36~~ 39 43 ~~60~~ ~~60~~ 62 74 74 80 81 83

4) Find the median of the lower half. This is called Q1 or the Lower Quartile.

Pittsburgh ~~34~~ ~~36~~ ~~39~~ ~~43~~ ~~60~~ 60 62 ~~74~~ ~~74~~ ~~80~~ ~~81~~ ~~83~~

5) Find the median of the upper half. This is called Q3 or the Upper Quartile.

Pittsburgh 34 36 39 43 60 60 ~~62~~ ~~74~~ 74 80 ~~81~~ ~~83~~

6) Find the difference between Q3 and Q1 to find the interquartile range.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

Minimum: 34

Maximum: 83

Median: 61

Q1: 41

Q3: 77

$IQR = Q3 - Q1 = 36$

$$\begin{array}{r} 77 \\ - 41 \\ \hline 36 \end{array}$$

$$\begin{array}{r} 1 \\ 43 \\ + 39 \\ \hline 82 \\ \hline 2 \\ \hline 41 \end{array}$$

$$\begin{array}{r} 61 \\ 2 \overline{) 122} \\ \underline{- 120} \\ 22 \\ \underline{- 20} \\ 20 \\ \underline{- 20} \\ 0 \end{array}$$
$$\begin{array}{r} 60 + 62 = 122 \\ \hline 2 = 61 \end{array}$$
$$\begin{array}{r} 74 + 80 = 154 \\ \hline 2 = 77 \end{array}$$

$$\begin{array}{r} 77 \\ 2 \overline{) 154} \\ \underline{- 170} \\ 14 \\ \underline{- 14} \\ 0 \end{array}$$

Patricia

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

ODD number of data points

7) Put the data in order.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

8) Find the minimum and the maximum

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

9) Find the median

L.A. ~~56~~ ~~58~~ ~~59~~ ~~60~~ ~~61~~ 62 63 64 65 66 68 69 72

10) Find the median of the lower half. Do NOT include the median when you are counting. This is called Q1 or the Lower Quartile.

L.A. ~~56~~ ~~58~~ 59 60 ~~61~~ ~~62~~ 63 64 65 66 68 69 72

11) Find the median of the upper half. Do NOT include the median when you are counting. This is called Q3 or the Upper Quartile.

L.A. 56 58 59 60 61 62 63 ~~64~~ ~~65~~ 66 68 ~~69~~ ~~72~~

12) Find the difference between Q3 and Q1 to find the interquartile range.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

0.59.5
2 | 119.0
-10.0

19.0
-18.0

60.0
+59.0

119.0
2 =

0.67
2 | 134
-12.0

14.0
-14.0

66.0
+68.0

134.0
2 =

Minimum: 56
Maximum: 72
Median: 63
Q1: 59.5
Q3: 67
IQR: 7.5

16
58.0
-10.0

59.5
7.5

Name: Baniyan

Problem solving task 6.14

Your friend Robert (from last class) and his family definitely don't want to move to New York or San Francisco anymore due to rent prices. He is now considering Pittsburgh and Portland. Remember, he wants weather that is fairly consistent. He will use the data below to help him make his decision.

Pittsburgh, PA

Lowest 25% of average monthly temperatures	37-45.5 degrees
Lower 25% of average monthly temperatures	45.5-63 degrees
Upper 25% of average monthly temperatures	63-77 degrees
Highest 25% of average monthly temperatures	77-83 degrees

Portland, OR

Lowest 25% of average monthly temperatures	56-60 degrees
Lower 25% of average monthly temperatures	60-62 degrees
Upper 25% of average monthly temperatures	62 to 65 degrees
Highest 25% of average monthly temperatures	65 to 69 degrees

Why is having this summary of data more helpful for Robert than just having the mean temperature for each city?

It gives us more of what to expect for lower monthly temps and the high monthly temps.

Based on this data and Robert's desire to live in a place with fairly consistent weather, where should he move?

Portland because the temperature is more consistent and in the 50's and 60's. But in Pittsburgh the temperature is more spread out and not in the same area.

Baniyah

Keep in notebook

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

Even number of data points

1) Put the data in order.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

2) Find the minimum and the maximum

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

3) Find the median

Pittsburgh ~~34~~ ~~36~~ ~~39~~ ~~43~~ 60 60 62 ~~74~~ ~~74~~ ~~80~~ ~~81~~ 83

4) Find the median of the lower half. This is called Q1 or the Lower Quartile.

Pittsburgh ~~34~~ 36 39 43 60 60 | 62 74 74 80 ~~81~~ 83
14 77

5) Find the median of the upper half. This is called Q3 or the Upper Quartile.

Pittsburgh 34 36 39 43 60 60 | 62 74 74 80 ~~81~~ 83
77

6) Find the difference between Q3 and Q1 to find the interquartile range.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

Handwritten calculations for finding the median and quartiles:

$$\begin{array}{r} 06 | \\ 2 \overline{) 122} \\ \underline{62} \\ 122 \\ \underline{122} \\ 002 \\ \underline{002} \\ 0 \end{array}$$

$$\begin{array}{r} 07 | \\ 2 \overline{) 154} \\ \underline{14} \\ 154 \\ \underline{154} \\ 000 \end{array}$$

- Minimum: 34
- Maximum: 83
- Median: 61
- Q1: 41
- Q3: 77

$$\frac{77}{41} = 36.10$$

$$IQR = Q3 - Q1$$

Range of 36

Parity

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

ODD number of data points

7) Put the data in order.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

8) Find the minimum and the maximum

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

9) Find the median

L.A. ~~56~~ ~~58~~ ~~59~~ ~~60~~ ~~61~~ ~~62~~ **63** ~~64~~ ~~65~~ ~~66~~ ~~68~~ ~~69~~ ~~72~~

10) Find the median of the lower half. Do NOT include the median when you are counting. This is called Q1 or the Lower Quartile.

$$\begin{array}{r} + 59 \\ + 60 \\ \hline 119 \\ 2 \end{array}$$

L.A. ~~56~~ ~~58~~ 59 60 ~~61~~ ~~62~~ 63 64 65 66 68 69 72

11) Find the median of the upper half. Do NOT include the median when you are counting. This is called Q3 or the Upper Quartile.

L.A. 56 58 59 60 61 62 63 ~~64~~ ~~65~~ 66 68 69 72

$$\begin{array}{r} + 68 \\ + 66 \\ \hline 134 \\ 2 \end{array}$$

12) Find the difference between Q3 and Q1 to find the interquartile range.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

- Minimum: 56

- Maximum: 72

- Median: 63

Q1: 59.5

Q3: 67

IQR: Q1 - Q3

IQR = 7.5

$$\begin{array}{r} 65.95 \\ 2 \overline{) 119} \\ \underline{- 0} \\ 119 \\ \underline{- 10} \\ 19 \\ \underline{18} \\ 1 \end{array}$$

$$\begin{array}{r} 67 \\ 2 \overline{) 134} \\ \underline{- 0} \\ 134 \\ \underline{- 12} \\ 14 \\ \underline{14} \\ 0 \end{array}$$

$$\begin{array}{r} 16 \\ 5.47 \\ \underline{- 87.810} \\ 59.5 \\ \hline 67.5 \end{array}$$

Name: Melissa Starwood

Problem solving task 6.14

Your friend Robert (from last class) and his family definitely don't want to move to New York or San Francisco anymore due to rent prices. He is now considering Pittsburgh and Portland. Remember, he wants weather that is fairly consistent. He will use the data below to help him make his decision.

Pittsburgh, PA

Lowest 25% of average monthly temperatures	37-45.5 degrees
Lower 25% of average monthly temperatures	45.5-63 degrees
Upper 25% of average monthly temperatures	63-77 degrees
Highest 25% of average monthly temperatures	77-83 degrees

Portland, OR

Lowest 25% of average monthly temperatures	56-60 degrees
Lower 25% of average monthly temperatures	60-62 degrees
Upper 25% of average monthly temperatures	62 to 65 degrees
Highest 25% of average monthly temperatures	65 to 69 degrees

Why is having this summary of data more helpful for Robert than just having the mean temperature for each city?

It's helpful because we have a summary of data instead of having the mean of each city because the mean just tells us the average.

Based on this data and Robert's desire to live in a place with fairly consistent weather, where should he move?

Math

Keep in notebook

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

Even number of data points

1) Put the data in order.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

2) Find the minimum and the maximum

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

3) Find the median

Pittsburgh ~~34~~ ~~36~~ ~~39~~ ~~43~~ ~~60~~ 60 62 ~~74~~ ~~74~~ ~~80~~ ~~81~~ ~~83~~

4) Find the median of the lower half. This is called Q1 or the Lower Quartile.

Pittsburgh ~~34~~ ~~36~~ 39 43 ~~60~~ ~~60~~ 62 74 74 80 81 83

5) Find the median of the upper half. This is called Q3 or the Upper Quartile.

Pittsburgh 34 36 39 43 60 60 ~~62~~ ~~74~~ 74 80 ~~81~~ ~~83~~

6) Find the difference between Q3 and Q1 to find the interquartile range.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

Minimum: 34

Maximum: 83

Median: 61

Q1: 41

Q3: 77

IQR: 36

$$IQR = Q3 - Q1$$

$$\frac{39 + 43}{2} = 41$$

$$\frac{74 + 80}{2} = 77$$

$$\frac{41 + 77}{2} = 59$$

$$\frac{43 + 39}{2} = 41$$

$$\frac{77 + 80}{2} = 78.5$$

$$\frac{82 + 84}{2} = 83$$

$$\frac{62 + 60}{2} = 61$$

McSor

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

ODD number of data points

7) Put the data in order.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

8) Find the minimum and the maximum

L.A. (56) 58 59 60 61 62 63 64 65 66 68 69 (72)

9) Find the median

L.A. ~~56~~ ~~58~~ ~~59~~ ~~60~~ ~~61~~ ~~62~~ (63) ~~64~~ ~~65~~ ~~66~~ ~~68~~ ~~69~~ 72

10) Find the median of the lower half. Do NOT include the median when you are counting. This is called Q1 or the Lower Quartile.

L.A. ~~56~~ ~~58~~ 59 60 ~~61~~ ~~62~~ | 63 64 65 66 68 69 72

11) Find the median of the upper half. Do NOT include the median when you are counting. This is called Q3 or the Upper Quartile.

L.A. 56 58 59 60 61 62 | 63 ~~64~~ ~~65~~ 66 68 ~~69~~ ~~72~~

12) Find the difference between Q3 and Q1 to find the interquartile range.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

Minimum: 56
Maximum: 72
Median: 63
Q1: 59.5
Q3: 67
IQR: 7.5

$$\begin{array}{r} 16 \\ 59.5 \\ \hline 59.5 \\ 17.5 \end{array}$$

$$\begin{array}{r} 60 \\ + 59 \\ \hline 119 \end{array}$$

$$\begin{array}{r} 68 \\ + 66 \\ \hline 134 \end{array}$$

$$\begin{array}{r} 0.67 \\ 2 \overline{) 134} \\ \underline{-02} \\ 13 \\ \underline{-12} \\ 14 \\ \underline{-14} \\ 0 \end{array}$$

Name: Juneidy

4/1/19

Problem solving task 6.14

Your friend Robert (from last class) and his family definitely don't want to move to New York or San Francisco anymore due to rent prices. He is now considering Pittsburgh and Portland. Remember, he wants weather that is fairly consistent. He will use the data below to help him make his decision.

Pittsburgh, PA

Lowest 25% of average monthly temperatures	37-45.5 degrees
Lower 25% of average monthly temperatures	45.5-63 degrees
Upper 25% of average monthly temperatures	63-77 degrees
Highest 25% of average monthly temperatures	77-83 degrees

$$\begin{array}{r} 15 \\ 48.5 \\ - 37.0 \\ \hline 11.5 \end{array}$$

Portland, OR

Lowest 25% of average monthly temperatures	56-60 degrees
Lower 25% of average monthly temperatures	60-62 degrees
Upper 25% of average monthly temperatures	62 to 65 degrees
Highest 25% of average monthly temperatures	65 to 69 degrees

$$\begin{array}{r} 60 \\ - 56 \\ \hline 4 \end{array}$$

Why is having this summary of data more helpful for Robert than just having the mean temperature for each city?

because you can't just look and tell about what range it's.

Based on this data and Robert's desire to live in a place with fairly consistent weather, where should he move?

Portland b/c it has a much less ~~range~~ range, 13 < 46
Port Pits

$$\begin{array}{r} 69 \\ - 56 \\ \hline 13 \end{array}$$

$$\begin{array}{r} 78 \\ - 37 \\ \hline 41 \end{array}$$

Juneidy

4/1/19

Keep in notebook

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

Even number of data points

1) Put the data in order.

Pittsburgh ~~34~~ ~~36~~ ~~39~~ ~~43~~ 60 (60 62) ~~74~~ ~~74~~ ~~80~~ ~~81~~ ~~83~~

$102/2$

2) Find the minimum and the maximum

Pittsburgh ~~34~~ ~~36~~ (39 43) ~~60~~ ~~60~~ 62 74 74 80 81 83

$82/2$

41

3) Find the median

Pittsburgh 34 36 39 43 60 60 | 62 74 (74 80) 81 83

$154/2$

77

4) Find the median of the lower half. This is called Q1 or the Lower Quartile.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

5) Find the median of the upper half. This is called Q3 or the Upper Quartile.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

6) Find the difference between Q3 and Q1 to find the interquartile range.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

Minimum: 34

Maximum: 83

Median : 61

Q1 : 41

Q3 : 77

Interquartile range = $Q3 - Q1$

$77 - 41$

36

June 10th

4/1/19

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

ODD number of data points

7) Put the data in order.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

8) Find the minimum and the maximum

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

9) Find the median

L.A. ~~56~~ ~~58~~ ~~59~~ ~~60~~ ~~61~~ ~~62~~ (63) ~~64~~ ~~65~~ ~~66~~ ~~68~~ ~~69~~ ~~72~~

10) Find the median of the lower half. Do NOT include the median when you are counting. This is called Q1 or the Lower Quartile.

L.A. ~~56~~ ~~58~~ (59 60) ~~61~~ ~~62~~ 63 64 65 66 68 69 72
179/2 59.5

11) Find the median of the upper half. Do NOT include the median when you are counting. This is called Q3 or the Upper Quartile.

L.A. 56 58 59 60 61 62 63 ~~64~~ ~~65~~ (66 68) ~~69~~ ~~72~~
134/2 67

12) Find the difference between Q3 and Q1 to find the interquartile range

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

Minimum: 56
Maximum: 72
Q1: 59.5
Q3: 67
IQR: 7.5

IQR = 7.5

~~56 72~~
~~59~~
~~67~~

IQR
big
more
variability

Name: Ayala 1

Problem solving task 6.14

Your friend Robert (from last class) and his family definitely don't want to move to New York or San Francisco anymore due to rent prices. He is now considering Pittsburgh and Portland. Remember, he wants weather that is fairly consistent. He will use the data below to help him make his decision.

Pittsburgh, PA

Lowest 25% of average monthly temperatures	37-45.5 degrees $R: 8.5$
Lower 25% of average monthly temperatures	45.5-63 degrees
Upper 25% of average monthly temperatures	63-77 degrees
Highest 25% of average monthly temperatures	77-83 degrees

$$\begin{array}{r} 78.5 \\ -37 \\ \hline R: 46 \end{array} \quad \begin{array}{r} 45.5 \\ -37.0 \\ \hline 8.5 \end{array}$$

Portland, OR

Lowest 25% of average monthly temperatures	56-60 degrees $R: 4$
Lower 25% of average monthly temperatures	60-62 degrees
Upper 25% of average monthly temperatures	62 to 65 degrees
Highest 25% of average monthly temperatures	65 to 69 degrees

$$\begin{array}{r} 64 \\ -56 \\ \hline R: 13 \end{array}$$

Why is having this summary of data more helpful for Robert than just having the mean temperature for each city? *It helps because Robert can get a good view on what the temperature is like at the highest and lowest 25%. It gives the range.*

Based on this data and Robert's desire to live in a place with fairly consistent weather, where should he move?

He should move to Portland, OR because the temperature range is 13°.

Keep in notebook

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

Even number of data points

1) Put the data in order.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

2) Find the minimum and the maximum

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

3) Find the median

Pittsburgh ~~34~~ ~~36~~ ~~39~~ ~~43~~ ~~60~~ 60 \checkmark 62 ~~74~~ ~~74~~ 80 ~~81~~ ~~83~~
 $122 \div 2 = 61$

$$\frac{60+62}{2} = \frac{122}{2} = 61$$

4) Find the median of the lower half. This is called Q1 or the Lower Quartile.

Pittsburgh ~~34~~ ~~36~~ 39 \checkmark 43 ~~60~~ ~~60~~ 62 74 74 80 81 83
 $\frac{39+43}{2} = \frac{82}{2} = 41$

5) Find the median of the upper half. This is called Q3 or the Upper Quartile.

Pittsburgh 34 36 39 43 60 60 ~~62~~ ~~74~~ 74 \checkmark 80 ~~81~~ ~~83~~
 $154 \div 2 = 77$

$$\frac{74+80}{2} = \frac{154}{2} = 77$$

6) Find the difference between Q3 and Q1 to find the interquartile range.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

- * Minimum: 34
- * Maximum: 83
- * Median: 61
- * Q1: 41
- * Q3: 77

$$\begin{aligned} \text{IQR} &= \text{Q3} - \text{Q1} \\ \text{IQR} &= 77 - 41 \\ \text{IQR} &= 36 \end{aligned}$$

$$\begin{array}{r} 77 \\ -41 \\ \hline 36 \end{array}$$

Five Number Summary

Ayala

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

ODD number of data points

7) Put the data in order.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

8) Find the minimum and the maximum

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

9) Find the median

L.A. ~~56~~ ~~58~~ ~~59~~ ~~60~~ ~~61~~ ~~62~~ 63 ~~64~~ ~~65~~ ~~66~~ ~~68~~ ~~69~~ ~~72~~

10) Find the median of the lower half. Do NOT include the median when you are counting. This is called Q1 or the Lower Quartile.

L.A. ~~56~~ ~~58~~ 59 60 ~~61~~ ~~62~~ 63 64 65 66 68 69 72

11) Find the median of the upper half. Do NOT include the median when you are counting. This is called Q3 or the Upper Quartile.

L.A. 56 58 59 60 61 62 63 ~~64~~ ~~65~~ 66 68 ~~69~~ ~~72~~

$$\frac{66+68}{2} = \frac{134}{2} = 67$$

$$\begin{array}{r} 1 \\ 66 \\ + 68 \\ \hline 134 \\ 2 \overline{)134} \\ \underline{132} \\ 2 \end{array}$$

12) Find the difference between Q3 and Q1 to find the interquartile range.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

- * Min = 56
- * Max = 72
- * Med = 63
- * Q1 = 59.5
- * Q3 = 67
- ** IQR = 7.5

5# Summary

Name: Carl Chris

Problem solving task 6.14

Your friend Robert (from last class) and his family definitely don't want to move to New York or San Francisco anymore due to rent prices. He is now considering Pittsburgh and Portland. Remember, he wants weather that is fairly consistent. He will use the data below to help him make his decision.

Pittsburgh, PA

Lowest 25% of average monthly temperatures	37-45.5 degrees
Lower 25% of average monthly temperatures	45.5-63 degrees
Upper 25% of average monthly temperatures	63-77 degrees
Highest 25% of average monthly temperatures	77-83 degrees

Portland, OR

Lowest 25% of average monthly temperatures	56-60 degrees
Lower 25% of average monthly temperatures	60-62 degrees
Upper 25% of average monthly temperatures	62 to 65 degrees
Highest 25% of average monthly temperatures	65 to 69 degrees

Why is having this summary of data more helpful for Robert than just having the mean temperature for each city?

The summary is more helpful because it tells us only the average of the whole month but the summary tells us different averages on the different parts of the months.

Based on this data and Robert's desire to live in a place with fairly consistent weather, where should he move?

Robert should move to Portland, OR.

CC

Keep in notebook

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

Even number of data points

1) Put the data in order.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

2) Find the minimum and the maximum

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

3) Find the median

Pittsburgh ~~34~~ ~~36~~ ~~39~~ ~~43~~ ~~60~~ (60 62) ~~74~~ ~~74~~ ~~80~~ ~~81~~ ~~83~~

4) Find the median of the lower half. This is called Q1 or the Lower Quartile.

Pittsburgh ~~34~~ ~~36~~ (39 43) ~~60~~ ~~60~~ 62 74 74 80 81 83

5) Find the median of the upper half. This is called Q3 or the Upper Quartile.

Pittsburgh 34 36 39 43 60 60 ~~62~~ ~~74~~ (74 80) ~~81~~ ~~83~~

6) Find the difference between Q3 and Q1 to find the interquartile range.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

IQR: 36
 minimum: 34
 maximum: 83
 median: 61
 Q1: 41
 Q3: 77

$$\begin{array}{r} 60 \\ + 62 \\ \hline 122 \div 2 = 61 \end{array}$$

$$\begin{array}{r} 61 \\ 2 \overline{) 122} \\ \underline{12} \\ 0 \end{array}$$

$$\begin{array}{r} 39 \\ + 43 \\ \hline 82 \div 2 = 41 \end{array}$$

$$\begin{array}{r} 41 \\ 2 \overline{) 82} \\ \underline{8} \\ 0 \end{array}$$

$$\begin{array}{r} 77 \\ - 41 \\ \hline 36 \end{array}$$

$$\begin{array}{r} 74 \\ + 80 \\ \hline 154 \div 2 = \end{array}$$

$$IQR = Q3 - Q1$$

$$\begin{array}{r} 77 \\ 2 \overline{) 154} \\ \underline{14} \\ 14 \\ \underline{14} \\ 0 \end{array}$$

CC

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

ODD number of data points

7) Put the data in order.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

8) Find the minimum and the maximum

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

9) Find the median

L.A. ~~56~~ ~~58~~ ~~59~~ ~~60~~ ~~61~~ ~~62~~ (63) ~~64~~ ~~65~~ ~~66~~ ~~68~~ ~~69~~ ~~72~~

10) Find the median of the lower half. Do NOT include the median when you are counting. This is called Q1 or the Lower Quartile.

L.A. ~~56~~ ~~58~~ (59) (60) ~~61~~ ~~62~~ 63 64 65 66 68 69 72

11) Find the median of the upper half. Do NOT include the median when you are counting. This is called Q3 or the Upper Quartile.

L.A. 56 58 59 60 61 62 63 ~~64~~ ~~65~~ (66) (68) ~~69~~ ~~72~~

12) Find the difference between Q3 and Q1 to find the interquartile range.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

Minimum: 56
 maximum: 72
 median: 63
 Q1: 59.5
 Q3: 67
 IQR: 8.5

$$\begin{array}{r} 59 \\ + 60 \\ \hline 119 \div 2 = 59.5 \end{array}$$

$$\begin{array}{r} 66 \\ + 68 \\ \hline 134 \div 2 = 67 \end{array}$$

$$\begin{array}{r} 59.5 \\ - 67 \\ \hline - 7.5 \end{array}$$

$$2 \sqrt{\begin{array}{r} 59.5 \\ 119.0 \\ \hline 19 \\ 18 \\ \hline 10 \\ 70 \\ 0 \end{array}}$$

$$2 \sqrt{\begin{array}{r} 67 \\ 134 \\ \hline 12 \\ 14 \\ \hline 14 \\ 0 \end{array}}$$

Name: Harry

Problem solving task 6.14

Your friend Robert (from last class) and his family definitely don't want to move to New York or San Francisco anymore due to rent prices. He is now considering Pittsburgh and Portland. Remember, he wants weather that is fairly consistent. He will use the data below to help him make his decision.

Pittsburgh, PA

Lowest 25% of average monthly temperatures	37-45.5 degrees
Lower 25% of average monthly temperatures	45.5-63 degrees
Upper 25% of average monthly temperatures	63-77 degrees
Highest 25% of average monthly temperatures	77-83 degrees

Portland, OR

Lowest 25% of average monthly temperatures	56-60 degrees
Lower 25% of average monthly temperatures	60-62 degrees
Upper 25% of average monthly temperatures	62 to 65 degrees
Highest 25% of average monthly temperatures	65 to 69 degrees

Why is having this summary of data more helpful for Robert than just having the mean temperature for each city?

Having a summary of the data is more helpful than the mean because you can actually have data points that you can make decision off of instead of finding the average temp.

Based on this data and Robert's desire to live in a place with fairly consistent weather, where should he move?

He should move to Portland since he has weather that is fairly between in the range of the high fifties to the high sixties.

Hanny

Keep in notebook

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

Even number of data points

1) Put the data in order.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

2) Find the minimum and the maximum

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

3) Find the median

Pittsburgh ~~34~~ ~~36~~ ~~39~~ ~~43~~ ~~60~~ 60 62 ~~74~~ ~~74~~ ~~80~~ ~~81~~ ~~83~~

$$60 + 62 = 122$$
$$122 \div 2 = 61$$

4) Find the median of the lower half. This is called Q1 or the Lower Quartile.

Pittsburgh ~~34~~ ~~36~~ 39 43 ~~60~~ ~~60~~ | 62 74 74 80 81 83

$$\frac{43 + 39}{2} = 41$$

5) Find the median of the upper half. This is called Q3 or the Upper Quartile.

Pittsburgh 34 36 39 43 60 60 | ~~62~~ ~~74~~ 74 80 ~~81~~ ~~83~~

$$\frac{80 + 74}{2} = 77$$

6) Find the difference between Q3 and Q1 to find the interquartile range.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

$$IQR = Q3 - Q1$$

minimum: 34
maximum: 83

median: 61

Q1: 41

Q3: 77

IQR:
$$\begin{array}{r} 77 \\ - 41 \\ \hline 36 \end{array}$$

Harry

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

ODD number of data points

7) Put the data in order.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

8) Find the minimum and the maximum

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

9) Find the median

L.A. ~~56~~ ~~58~~ ~~59~~ ~~60~~ ~~61~~ ~~62~~ 63 ~~64~~ ~~65~~ ~~66~~ ~~68~~ ~~69~~ ~~72~~

10) Find the median of the lower half. Do NOT include the median when you are counting. This is called Q1 or the Lower Quartile.

L.A. ~~56~~ ~~58~~ 59 60 ~~61~~ ~~62~~ ~~63~~ 64 65 66 68 69 72

$$\frac{59 + 60}{2} = 59.5$$

11) Find the median of the upper half. Do NOT include the median when you are counting. This is called Q3 or the Upper Quartile.

L.A. 56 58 59 60 61 62 ~~63~~ ~~64~~ ~~65~~ 66 68 ~~69~~ ~~72~~

$$\frac{66 + 68}{2} = 67$$

12) Find the difference between Q3 and Q1 to find the interquartile range.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

$$67 - 59.5 = 7.5$$

minimum: 56
maximum: 72
median: 63
Q1: 59.5
Q3: 67
IQR: 7.5

Name: NICOLE

Problem solving task 6.14

Your friend Robert (from last class) and his family definitely don't want to move to New York or San Francisco anymore due to rent prices. He is now considering Pittsburgh and Portland. Remember, he wants weather that is fairly consistent. He will use the data below to help him make his decision.

Pittsburgh, PA

Lowest 25% of average monthly temperatures	37-45.5 degrees
Lower 25% of average monthly temperatures	45.5-63 degrees
Upper 25% of average monthly temperatures	63-77 degrees
Highest 25% of average monthly temperatures	77-83 degrees

$83 - 37 = 46$
 Range: 46

$$\begin{array}{r} 318 \\ 478.5 \\ \hline 37.0 \\ \hline 8.5 \end{array}$$

Portland, OR

Lowest 25% of average monthly temperatures	56-60 degrees
Lower 25% of average monthly temperatures	60-62 degrees
Upper 25% of average monthly temperatures	62 to 65 degrees
Highest 25% of average monthly temperatures	65 to 69 degrees

$69 - 56 = 13$
 Range: 13

$$\begin{array}{r} 510 \\ \cancel{60} \\ \hline 56 \\ \hline 04 \end{array}$$

Why is having this summary of data more helpful for Robert than just having the mean temperature for each city?

This summary of data more helpful for Robert than just having the mean temperature each city is that

Based on this data and Robert's desire to live in a place with fairly consistent weather, where should he move?

He should live in
 portland, OR
 Range is that low
 us to know that low
 High Prize or

Nicole

Keep in notebook

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

Even number of data points

1) Put the data in order.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

2) Find the minimum and the maximum

Pittsburgh (34) 36 39 43 60 60 62 74 74 80 81 (83)

3) Find the median

Pittsburgh ~~34~~ ~~36~~ ~~39~~ ~~43~~ 60 60 62 ~~74~~ ~~74~~ ~~80~~ ~~81~~ ~~83~~

4) Find the median of the lower half. This is called Q1 or the Lower Quartile.

Pittsburgh ~~34~~ ~~36~~ 39 ~~43~~ ~~60~~ 60 62 74 74 80 81 83

5) Find the median of the upper half. This is called Q3 or the Upper Quartile.

Pittsburgh 34 36 39 43 60 60 ~~62~~ ~~74~~ ~~74~~ ~~80~~ ~~81~~ ~~83~~

6) Find the difference between Q3 and Q1 to find the interquartile range.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

$$\begin{array}{r} 41 \\ 2 \overline{) 82} \\ \underline{82} \\ 0 \end{array}$$

$$\begin{array}{r} 34 \\ 43 \\ \hline 82 \end{array}$$

$$\begin{array}{r} 60 \\ + 62 \\ \hline 122 \\ 2 \overline{) 122} \\ \underline{122} \\ 0 \end{array}$$

$$\begin{array}{r} 80 \\ + 74 \\ \hline 154 \\ 2 \overline{) 154} \\ \underline{140} \\ 14 \\ \underline{14} \\ 0 \end{array}$$

Minimum: 34

Maximum: 83

Median: 61

Q1: 41

Q3: 77

IQR: 36

$$IQR = Q3 - Q1$$

$$IQR = 77 - 41 = 36$$

$$\begin{array}{r} 77 \\ 41 \\ \hline 36 \end{array}$$

Nicole

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

ODD number of data points

7) Put the data in order.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

8) Find the minimum and the maximum

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

9) Find the median

L.A. ~~56~~ ~~58~~ ~~59~~ ~~60~~ ~~61~~ ~~62~~ 63 ~~64~~ ~~65~~ ~~66~~ ~~68~~ ~~69~~ ~~72~~

10) Find the median of the lower half. Do NOT include the median when you are counting. This is called Q1 or the Lower Quartile.

L.A. ~~56~~ ~~58~~ 59 60 ~~61~~ ~~62~~ 63 64 65 66 68 69 72

11) Find the median of the upper half. Do NOT include the median when you are counting. This is called Q3 or the Upper Quartile.

L.A. 56 58 59 60 61 62 63 ~~64~~ ~~65~~ 66 68 ~~69~~ ~~72~~

12) Find the difference between Q3 and Q1 to find the interquartile range.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

59
60

119

067
134
121

014
147

0

+ 66
68

134

minimum: 56

maximum: 72

median: 63

Q1: 59.5

Q3: 67

IQR: 7.5

16
~~57~~ 10
~~67~~
59.5

07.5

Name: Aneesa

Problem solving task 6.14

Your friend Robert (from last class) and his family definitely don't want to move to New York or San Francisco anymore due to rent prices. He is now considering Pittsburgh and Portland. Remember, he wants weather that is fairly consistent. He will use the data below to help him make his decision.

Pittsburgh, PA

Lowest 25% of average monthly temperatures	37-45.5 degrees
Lower 25% of average monthly temperatures	45.5-63 degrees
Upper 25% of average monthly temperatures	63-77 degrees
Highest 25% of average monthly temperatures	77-83 degrees

Portland, OR

Lowest 25% of average monthly temperatures	56-60 degrees
Lower 25% of average monthly temperatures	60-62 degrees
Upper 25% of average monthly temperatures	62 to 65 degrees
Highest 25% of average monthly temperatures	65 to 69 degrees

60
53

Why is having this summary of data more helpful for Robert than just having the mean temperature for each city?

The mean just tells us the average of a data set.
A summary gives us more info about a data set and which is consistent.

Based on this data and Robert's desire to live in a place with fairly consistent weather, where should he move?

He should move to Portland.

Aneesa

Keep in notebook

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

Even number of data points

1) Put the data in order.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

2) Find the minimum and the maximum

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

3) Find the median

Pittsburgh ~~34~~ ~~36~~ ~~39~~ ~~43~~ 60 60 62 74 74 80 81 83

4) Find the median of the lower half. This is called Q1 or the Lower Quartile.

$$\begin{array}{r} 39 \\ + 43 \\ \hline 82 \end{array}$$

Pittsburgh ~~34~~ ~~36~~ 39 43 ~~60~~ 60 | 62 74 74 80 81 83

5) Find the median of the upper half. This is called Q3 or the Upper Quartile.

Pittsburgh 34 36 39 43 60 60 | ~~62~~ 74 74 80 81 83

6) Find the difference between Q3 and Q1 to find the interquartile range.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

★ Minimum: 34 ★ IQR = Q3 - Q1 = 36

★ Maximum: 83

★ Median: 61

★ Q1: 41

★ Q3: 77

$$\begin{array}{r} 77 \\ - 41 \\ \hline 36 \end{array}$$

$$\begin{array}{r} 60 \\ + 62 \\ \hline 122 \\ \hline 41 \\ \hline 82 \end{array}$$

$$\begin{array}{r} 061 \\ 2 \overline{) 122} \\ \underline{-12} \\ 02 \\ \underline{-2} \\ 0 \end{array}$$

$$\begin{array}{r} 74 \\ + 80 \\ \hline 154 \\ \hline 077 \\ 2 \overline{) 154} \\ \underline{-14} \\ 14 \\ \underline{-14} \\ 0 \end{array}$$

Aneesa

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

ODD number of data points

7) Put the data in order.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

8) Find the minimum and the maximum

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

9) Find the median

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

10) Find the median of the lower half. Do NOT include the median when you are counting. This is called Q1 or the Lower Quartile.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

11) Find the median of the upper half. Do NOT include the median when you are counting. This is called Q3 or the Upper Quartile.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

12) Find the difference between Q3 and Q1 to find the interquartile range.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

68
+66

134
2 | 134
 67
 2
 14
 -14
 0

- * Minimum = 56
- * Maximum = 72
- * Median = 63
- * Q1 = 59.5
- * Q3 = 67
- * IQR = 7.5

$$\begin{array}{r} 67 \\ 567.0 \\ - 59.5 \\ \hline 7.5 \end{array}$$

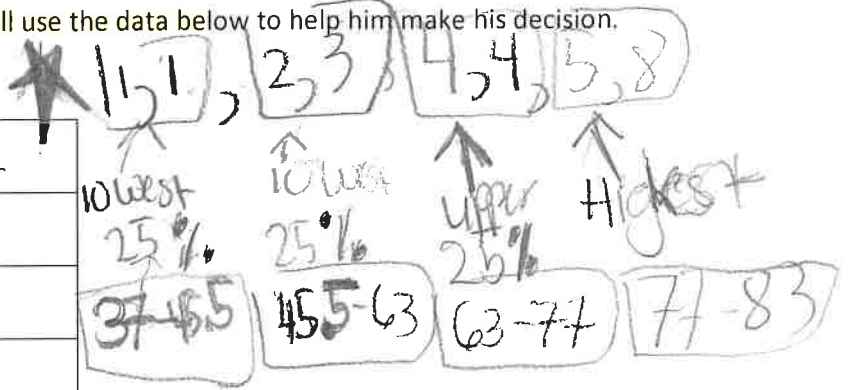
Name: Justine

Problem solving task 6.14

Your friend Robert (from last class) and his family definitely don't want to move to New York or San Francisco anymore due to rent prices. He is now considering Pittsburgh and Portland. Remember, he wants weather that is fairly consistent. He will use the data below to help him make his decision.

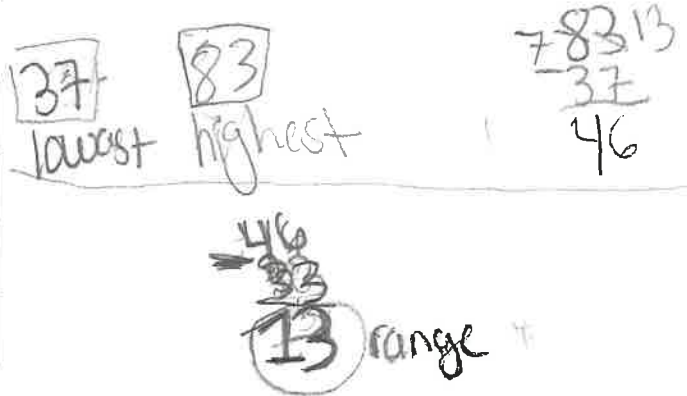
Pittsburgh, PA

Lowest 25% of average monthly temperatures	37-45.5 degrees
Lower 25% of average monthly temperatures	45.5-63 degrees
Upper 25% of average monthly temperatures	63-77 degrees
Highest 25% of average monthly temperatures	77-83 degrees



Portland, OR

Lowest 25% of average monthly temperatures	56-60 degrees
Lower 25% of average monthly temperatures	60-62 degrees
Upper 25% of average monthly temperatures	62 to 65 degrees
Highest 25% of average monthly temperatures	65 to 69 degrees



Why is having this summary of data more helpful for Robert than just having the mean temperature for each city?

This show that variability the range is 13
 smaller weather is more higher range
 more is it can be

Based on this data and Robert's desire to live in a place with fairly consistent weather, where should he move?

I think it's are Portland, OR are the
 are "it are the it are consistent are
 it are for it are

Justin

Keep in notebook

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

meat $\frac{2122}{124} = 17.11$

Even number of data points

1) Put the data in order.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

2) Find the minimum and the maximum

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

3) Find the median

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

$\frac{60+62}{2} = \frac{122}{2}$

4) Find the median of the lower half. This is called Q1 or the Lower Quartile.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

$\frac{39+43}{2} = 41$

5) Find the median of the upper half. This is called Q3 or the Upper Quartile.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

$\frac{74+80}{2} = \frac{154}{2}$

6) Find the difference between Q3 and Q1 to find the interquartile range.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

$\frac{154}{2} = 77$
 $\frac{77}{2} = 38.5$

minimum: 34

maximum: 83

median: 61

Q1: 41

Q3: 77

IQR: 36

IQR = Q3 - Q1

$\frac{77}{2} = 38.5$

Medd: 77

Name: Gobby

Problem solving task 6.14

Your friend Robert (from last class) and his family definitely don't want to move to New York or San Francisco anymore due to rent prices. He is now considering Pittsburgh and Portland. Remember, he wants weather that is fairly consistent. He will use the data below to help him make his decision.

Pittsburgh, PA

Lowest 25% of average monthly temperatures	37-45.5 degrees
Lower 25% of average monthly temperatures	45.5-63 degrees
Upper 25% of average monthly temperatures	63-77 degrees
Highest 25% of average monthly temperatures	77-83 degrees

$$\begin{array}{r} 45.5 \\ - 37.0 \\ \hline 8.5 \end{array}$$

Portland, OR

Lowest 25% of average monthly temperatures	56-60 degrees
Lower 25% of average monthly temperatures	60-62 degrees
Upper 25% of average monthly temperatures	62 to 65 degrees
Highest 25% of average monthly temperatures	65 to 69 degrees

Why is having this summary of data more helpful for Robert than just having the mean temperature for each city?

It's more helpful b/c here you can see the range and how far the data points are away from each other. With mean, you can't tell if there's an outlier or a skew.

Based on this data and Robert's desire to live in a place with fairly consistent weather, where should he move?

He should move to Portland because the range is 13; but in Pittsburgh, the range is 46 so that means there is more variability to the weather and it's not as constant as Portland's weather is.

$$\begin{array}{r} 83 \\ - 37 \\ \hline 46 \end{array}$$

Gabby

Keep in notebook

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

Even number of data points

1) Put the data in order.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

2) Find the minimum and the maximum

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

3) Find the median

Pittsburgh ~~34~~ ~~36~~ ~~39~~ ~~43~~ ~~60~~ 60 62 74 74 80 81 83
 $\frac{122}{2} = 61$

4) Find the median of the lower half. This is called Q1 or the Lower Quartile.

Pittsburgh ~~34~~ 36 39 | 43 ~~60~~ ~~60~~ 62 74 74 80 81 83
 $\frac{39+43}{2} = \frac{82}{2} = 41$

5) Find the median of the upper half. This is called Q3 or the Upper Quartile.

Pittsburgh 34 36 39 43 60 60 | ~~62~~ ~~74~~ 74 80 81 83
 $\frac{154}{2} = 77$

6) Find the difference between Q3 and Q1 to find the interquartile range.

Pittsburgh 34 36 39 43 60 60 62 74 74 80 81 83

2 $\frac{077}{154}$
 $\frac{14}{14}$

minimum: 34

maximum: 83

median: 61

Q1: 41

Q3: 77

$$IQR = Q3 - Q1 = 36$$

$$\begin{array}{r} 77 \\ - 41 \\ \hline 36 \end{array}$$

Gabby

We are going to find the Five Number Summary for these data sets so we can analyze the data's variability by looking at 4 groups.

ODD number of data points

7) Put the data in order.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

8) Find the minimum and the maximum

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

9) Find the median

L.A. ~~56~~ ~~58~~ ~~59~~ ~~60~~ ~~61~~ ~~62~~ 63 ~~64~~ ~~65~~ ~~66~~ ~~68~~ ~~69~~ ~~72~~

10) Find the median of the lower half. Do NOT include the median when you are counting. This is called Q1 or the Lower Quartile.

L.A. ~~56~~ ~~58~~ 59 60 ~~61~~ ~~62~~ 63 64 65 66 68 69 72

11) Find the median of the upper half. Do NOT include the median when you are counting. This is called Q3 or the Upper Quartile.

L.A. 56 58 59 60 61 62 63 ~~64~~ ~~65~~ 66 68 69 ~~72~~

$\frac{134}{2} = 67$

$\begin{array}{r} + 66 \\ 68 \\ \hline 134 \\ 2 \overline{)134} \\ \underline{120} \\ 14 \end{array}$

12) Find the difference between Q3 and Q1 to find the interquartile range.

L.A. 56 58 59 60 61 62 63 64 65 66 68 69 72

Minimum: 56

Maximum: 72

Median: 63

Q1: 59.5

Q3: 67

IQR: $\rightarrow Q3 - Q1: \dots$

$67.00 - 59.50 = 7.50$

$\begin{array}{r} 67.00 \\ - 59.50 \\ \hline 7.50 \end{array}$