

Percentiles and Quartiles

Give a description of the three quartiles:

Q₁:

Q₂:

Q₃:

Use the 31 temperatures in F° listed in the table to find the indicated percentile or quartile.

Temperatures in F° for January 2008, Latitude: 44 52 N, Longitude: 93 13 W

11	9	26	30	37	41	37	34	31	35	30	26
22	20	22	24	8	12	-1	4	8	9	3	8
19	25	37	43	36	-2	14					

1) P₁₀

6) P₅₅

2) P₃₀

7) P₆₅

3) P₁

8) Q₁

4) P₈₅

9) Q₂

5) P₂₅

10) Q₃

Extra Credit: What city is : 44 52 N, Longitude: 93 13 W?

Percentiles and Quartiles

Give a description of the three quartiles:

Q_1 : Separates the bottom 25% of the sorted values from the top 75%.

Q_2 : Separates the bottom 50% of the sorted values from the top 50%.

Q_3 : Separates the bottom 75% of the sorted values from the top 25%.

Use the 31 temperatures in F° listed in the table to find the indicated percentile or quartile.

Temperatures in F° for January 2008, Latitude: 44 52 N, Longitude: 93 13 W

11	9	26	30	37	41	37	34	31	35	30	26
22	20	22	24	8	12	-1	4	8	9	3	8
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Getting the wrong answers? Did you remember to write the numbers in numerical order?

- $P_{10} = 4$ $L = \frac{10}{100} \cdot 31 = 3.1$ Since L is not a whole number, round up to 4.
Find the 4th number in the list = 4
- $P_{30} = 9$ $L = \frac{30}{100} \cdot 31 = 9.3$ Since L is not a whole number, round up to 10.
Find the 10th number in the list = 9
- $P_1 = -2$ $L = \frac{1}{100} \cdot 31 = .31$ Since L is not a whole number, round up to 1.
Find the 1st number in the list = -2
- $P_{85} = 37$ $L = \frac{85}{100} \cdot 31 = 26.5$ Since L is not a whole number, round up to 27.
Find the 27th number in the list = 37
- $P_{25} = Q_1 = 9$ $L = \frac{25}{100} \cdot 31 = 7.7$ Since L is not a whole number, round up to 8.
Find the 8th number in the list = 9
- $P_{55} = 25$ $L = \frac{55}{100} \cdot 31 = 17.05$ Since L is not a whole number, round up to 18.
Find the 18th number in the list = 25

- 7) $P_{65} = 30$ $L = \frac{65}{100} \cdot 31 = 20.1$ Since L is not a whole number, round up to 21.
Find the 21st number in the list = 30
- 8) $Q_1 = P_{25} = 9$ $L = \frac{25}{100} \cdot 31 = 7.7$ Since L is not a whole number, round up to 8.
Find the 8th number in the list = 9
- 9) $Q_2 = P_{50} = 22$ $L = \frac{50}{100} \cdot 31 = 15.5$ Since L is not a whole number, round up to 16.
Find the 16th number in the list = 22
- 10) $Q_3 = P_{75} = 34$ $L = \frac{75}{100} \cdot 31 = 23.2$ Since L is not a whole number, round up to 24.
Find the 24th number in the list = 34

Extra Credit: What city is : 44 52 N, Longitude: 93 13 W?

Minneapolis/St.Paul, MN