

Percentiles and Quartiles

Give a description of the three quartiles:

Q₁:

Q₂:

Q₃:

Use the table to find the indicated percentile or quartile.

Max Temperatures in F° for January 2008, Latitude: 47 55 N, Longitude: 97 6 W

4	13	25	21	33	41	33	23	20	17	16	17
17	-4	17	18	11	-5	-6	-3	4	8	-1	9
9	20	30	24	1	-10	9					

1) P₁₀

6) P₆₄

2) P₂₆

7) P₇₈

3) P₃₁

8) Q₁

4) P₄₇

9) Q₂

5) P₅₅

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 table to find the indicated percentile or quartile.

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

4	13	25	21	33	41	33	23	20	17	16	17
17	-4	17	18	11	-5	-6	-3	4	8	-1	9
9	20	30	24	1	-10	9					

Getting the wrong answers? Did you remember to write the numbers in numerical order?

1) $P_{10} = -4$ $L = \frac{10}{100} \cdot 31 = 3.1$ Since L is not a whole number, round up to 4.
Find the 4th number in the list = -4

2) $P_{26} = 4$ $L = \frac{26}{100} \cdot 31 = 8.06$ Since L is not a whole number, round up to 9.
Find the 9th number in the list = 4

3) $P_{31} = 8$ $L = \frac{31}{100} \cdot 31 = 9.61$ Since L is not a whole number, round up to 10.
Find the 10th number in the list = 8

4) $P_{47} = 13$ $L = \frac{47}{100} \cdot 31 = 14.57$ Since L is not a whole number, round up to 15.
Find the 15th number in the list = 13

5) $P_{55} = 17$ $L = \frac{55}{100} \cdot 31 = 17.05$ Since L is not a whole number, round up to 18.
Find the 18th number in the list = 17

6) $P_{64} = 17$ $L = \frac{64}{100} \cdot 31 = 19.84$ Since L is not a whole number, round up to 20.
Find the 20th number in the list = 17

7) $P_{78} = 23$ $L = \frac{78}{100} \cdot 31 = 24.18$ Since L is not a whole number, round up to 25.
Find the 25th number in the list = 23

- 8) $Q_1 = P_{25} = 4$ $L = \frac{25}{100} \cdot 31 = 7.7$ Since L is not a whole number, round up to 8.
Find the 8th number in the list = 4
- 9) $Q_2 = P_{50} = 16$ $L = \frac{50}{100} \cdot 31 = 15.5$ Since L is not a whole number, round up to 16
Find the 16th number in the list = 16
- 10) $Q_3 = P_{75} = 21$ $L = \frac{75}{100} \cdot 31 = 23.2$ Since L is not a whole number, round up to 24.
Find the 24th number in the list = 21

Extra Credit: What city is : 47 55 N, Longitude: 97 6 W?

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