

The Ten Tallest Monuments in the U.S. – Algebra Equations Puzzle
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First, translate the ten clues below into ten simultaneous linear equations with ten variables. Then solve the ten equations to determine the heights (in feet) of the ten tallest monuments in the U.S. Then use the second set of clues to match the names of the monuments with their corresponding heights.

The first part of this exercise is an algebra exercise; the second part is a logic puzzle.

Let A = height of the tallest monument, B = height of the 2nd tallest monument,
C = height of the 3rd tallest monument, D = height of the 4th tallest monument,
E = height of the 5th tallest monument, F = height of the 6th tallest monument,
G = height of the 7th tallest monument, H = height of the 8th tallest monument,
J = height of the 9th tallest monument, and K = height of the 10th tallest monument.

CLUES:

1. The tenth tallest monument is only 1 foot less than the ninth tallest monument.
2. The sum of the sixth tallest monument and the seventh tallest monument is 20 feet more than the second tallest monument.
3. The fourth tallest monument is 100 feet taller than the eighth tallest monument.
4. Twenty-five times the difference of the sixth and seventh tallest monuments is 5 feet less than the third tallest monument.
5. The sum of the 4th, 8th, 9th, and 10th tallest monuments is 1,045 feet.
6. The second tallest monument is 15 feet taller than the third tallest monument.
7. The fourth tallest monument is 88 feet shorter than twice the tenth tallest monument.
8. The sum of the heights of the seventh tallest monument and the third tallest monument is 79 feet less than three times the sixth tallest monument.
9. The tallest monument is 30 feet less than three times the tenth tallest monument.
10. The sum of the heights of the ten tallest monuments is 3,741 feet.

After solving your equations, list your answers in the first column of blanks below:

Tallest monument: A = _____ Name = _____

2nd Tallest monument: B = _____ Name = _____

3rd Tallest monument: C = _____ Name = _____

4th Tallest monument: D = _____ Name = _____

5th Tallest monument: E = _____ Name = _____

6th Tallest monument: F = _____ Name = _____

7th Tallest monument: G = _____ Name = _____

8th Tallest monument: H = _____ Name = _____

9th Tallest monument: J = _____ Name = _____

10th Tallest monument: K = _____ Name = _____

To match the name to each of your answers above, use the following set of clues:

CLUES:

1. The ten tallest monuments in the United States in alphabetical order are:

- Bennington Battle Monument in Bennington, Vermont
- Bunker Hill Monument in Boston, Massachusetts
- Gateway Arch in St. Louis, Missouri
- High Point Monument in High Point, New Jersey
- Jefferson Davis Memorial in Fairview, Kentucky
- Perry's Victory and International Peace Memorial in Put-in-Bay, Ohio
- Pilgrim Monument in Cape Cod, Provincetown, Massachusetts
- San Jacinto Monument in La Porte, Texas
- Soldiers and Sailors Monument in Indianapolis, Indiana
- Washington Monument in Washington, DC

2. The Bunker Hill Monument is only 1 foot taller than the High Point Monument.

3. The Jefferson Davis Memorial is taller than the Bennington Battle Monument and shorter than the San Jacinto Monument.
4. The sum of the heights of the monuments in states beginning with the letter M is over 1,100 feet.
5. The Washington Monument is over 100 feet taller than the Perry's Victory and International Peace Memorial; and Perry's Victory and International Peace Memorial is exactly 100 feet taller than the Pilgrim Monument.
6. The Washington Monument and the monument that is 570 feet tall are both taller than the Jefferson Davis Memorial.
7. The San Jacinto Monument is taller than the Soldiers and Sailors Monument.
8. The Bennington Battle Monument is taller than the Soldiers and Sailors Monument but shorter than the Jefferson Davis Memorial.
9. The sum of the heights of the two monuments located in Massachusetts is less than 500 feet.