7 Seven VII

Corresponding ordinal: seventh.

The number 7 is a centered hexagonal number, as you can see in the pattern above.

The number 7 is the fourth odd number, the fourth prime number, and the sixth deficient number.

Twin primes are primes that differ by 2. The prime 7 is in the second pair of twin primes $5, 7$.

A very nice theorem, stated by Pierre de Fermat (1601-1665) and proved by Joseph Louis Lagrange (1736-1813), says that every number can be written as the sum of four or fewer nonzero square numbers. Note that $7 = 1^2 + 1^2 + 1^2 + 2^2$ is the first case that requires four nonzero squares.

As the sum of nine or fewer cubes: $7 = 1^3 + 1^3 + 1^3 + 1^3 + 1^3 + 1^3 + 1^3$.

As the difference of two squares: $7 = 4^2 - 3^2$.

The number 7 occurs in the Pythagorean triple $[7, 24, 25]$ and in no other.

The number 7 is the only prime followed by a cube. (Number Gossip)

The number 7 is the smallest number of sides of a regular polygon that cannot be constructed with straightedge and compass alone.

There are 7 points and 7 lines in the smallest projective plane.

The seventh President of the United States was Andrew Jackson.

The seventh state to enter the Union was Maryland.

The first ten amendments of the United States Constitution are called the *Bill of Rights*. The seventh amendment says that "In suits of common law where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved . . . ".

The seventh largest state in the United States is Nevada.

The American flag has seven red stripes.

There are seven days in a week.

"The seven seas" means all the oceans of the world.

The seven continents are North America, South America, Asia, Europe, Africa, Antarctic, and Australia.

Sir Isaac Newton identified seven colors in the spectrum of light: red, orange, yellow, green, blue, indigo, and violet.

"Snow White and the Seven Dwarfs" is a popular children's story that was made into a movie by the Disney Studios.

If you roll a pair of dice, the most likely sum you will get is 7. There are 36 ways that the dice can land, and six of those have a sum of 7. So there are 6 chances in 36, or 1 chance in 6, of getting a sum of 7.

The number 7 is the first number of the crap shooter's call, "7 come 11." Those two sums on the first roll of the dice pay off handsomely. The chance of this happening is 8 out of 36, or 2 out of 9.

The Seven Deadly Sins are Lust, Pride, Greed, Envy, Anger, Sloth, and Gluttony.

Rome wasn't built in a day, but it was built on 7 hills.

Coronado thought that the Seven Cities of Cibola held vast treasures, but they turned out to be only seven pueblos of the Zuni Indians in Arizona and New Mexico.

> As I was going to St. Ives I met a man with seven wives. Each wife had seven sacks, each sack had seven cats. Each cat had seven kits: kits, cats, sacks and wives. How many were going to St. Ives?