

Name _____

Unlocking the Secrets of Perfect Numbers and Mersenne Primes

Multiple Choice Questions

1. What is a perfect number?

- a) A number with no divisors
- b) A number that ends in zero
- c) A number with exactly two divisors
- d) A number equal to the sum of its divisors

2. Which of the following is a perfect number?

- a) 7
- b) 12
- c) 28
- d) 35

3. What is a Mersenne prime?

- a) A prime number that is divisible by 2
- b) A prime number that can be expressed as $2^p - 1$
- c) A prime number with exactly three divisors
- d) A prime number that is a multiple of 2

4. How are perfect numbers and Mersenne primes related?

- a) Perfect numbers are always Mersenne primes
- b) Mersenne primes are always perfect numbers
- c) Every even perfect number corresponds to a Mersenne prime
- d) There is no relationship between perfect numbers and Mersenne primes

5. Who discovered the formula relating perfect numbers to Mersenne primes?

- a) Euclid
- b) Isaac Newton
- c) Pythagoras
- d) Archimedes

