Prime Numbers Quiz PDF

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Why do prime numbers become less frequent as numbers increase?

Which of the following numbers are not prime? (Select all that apply)

- [ ] 21
- [ ] 22
- [ ] 23
- [ ] 24

Which of the following numbers is a prime number?

- ◯ 4
- ◯ 9
- ◯ 11
- ◯ 15

Explain why the number 1 is not considered a prime number.

Describe the significance of prime numbers in modern cryptography.

How does the Sieve of Eratosthenes algorithm work to identify prime numbers?

What is the Goldbach Conjecture, and why is it significant in number theory?

Discuss the historical contribution of Euclid to the study of prime numbers.

What is the only even prime number?

- ◯ 1
- ◯ 2
- ◯ 4
- ◯ 6

Who is credited with proving that there are infinitely many prime numbers?

- ◯ Pythagoras
- ◯ Euclid
- ◯ Euler
- ◯ Gauss

Which of the following is not a property of prime numbers?

- ◯ They have exactly two distinct positive divisors.
- ◯ They are always odd.
- ◯ They cannot be divided evenly by any number other than 1 and themselves.
- ◯ They are greater than 1.

Which of the following are applications of prime numbers? (Select all that apply)

- ☐ Cryptography
- ☐ Weather forecasting
- ☐ Random number generation
- ☐ Error detection algorithms

Which of the following are prime numbers? (Select all that apply)

- ☐ 23
- ☐ 25
- ☐ 29

- [ ] 31

Which of the following numbers is a Mersenne prime?

- ◯ 7
- ◯ 11
- ◯ 31
- ◯ 63

What is the smallest prime number greater than 10?

- ◯ 11
- ◯ 12
- ◯ 13
- ◯ 14

Which of the following statements about prime numbers are true? (Select all that apply)

- [ ] Every prime number is odd.
- [ ] There are infinitely many prime numbers.
- [ ] The number 1 is a prime number.
- [ ] Prime numbers are used in cryptography.

Which of the following numbers are prime? (Select all that apply)

- [ ] 17
- [ ] 18
- [ ] 19
- [ ] 20

Which method is commonly used to find all prime numbers up to a certain limit?

- ◯ Euclidean Algorithm
- ◯ Sieve of Eratosthenes
- ◯ Newton's Method
- ◯ Monte Carlo Method

Which of the following are characteristics of the Sieve of Eratosthenes? (Select all that apply)

- [ ] It is used to find prime numbers.

- [ ] It involves dividing numbers by all smaller numbers.
- [ ] It systematically eliminates multiples of primes.
- [ ] It can find the greatest common divisor.

Which theorem describes the distribution of prime numbers among positive integers?

- ◯ Fermat's Last Theorem
- ◯ Pythagorean Theorem
- ◯ Prime Number Theorem
- ◯ Goldbach's Conjecture