

# 1

## Questions

**1. Which of the following statements about the number 1 is true?**

- A. 1 is a composite number.
- B. 1 is the smallest prime number.
- C. 1 is an even number.
- D. 1 is the multiplicative identity in mathematics.

**2. What is a key characteristic of an identity matrix in linear algebra?**

- A. An identity matrix is a 1x1 matrix.
- B. An identity matrix has 1s on the main diagonal and 0s elsewhere.
- C. An identity matrix consists only of zeros.
- D. An identity matrix has all elements as 1s.

**3. What is a key feature of the unit circle that makes it fundamental in trigonometry?**

- A. The unit circle has a circumference of pi.
- B. The unit circle has a radius of one.
- C. The unit circle is only used for angles in radians.
- D. The unit circle is centered at the origin.

**4. How is one Coulomb of electric charge defined in terms of current and time?**

- A. One Coulomb defines the magnetic flux in a circuit.
- B. One Coulomb is the current of one Ampere flowing for one minute.
- C. One Coulomb corresponds to one Volt of potential.
- D. One Coulomb is defined as the charge of one Ampere per second.

**5. What is the magnitude of a unit vector in mathematics?**

- A. Unit vectors have a magnitude of zero.
- B. Unit vectors have a magnitude of one.
- C. Unit vectors have a magnitude equal to pi.
- D. Unit vectors have a magnitude of ten.

**6. What distinguishes first-order linear differential equations in calculus?**

- A. First-order linear differential equations involve exponential steps.
- B. First-order linear differential equations involve square roots.
- C. First-order linear differential equations involve quadratic functions.
- D. First-order linear differential equations involve derivatives to the first power.

**7. What is the absolute value of both 1 and -1?**

- A. -1
- B. -1
- C. 0
- D. 1