

## CHAPTER-5 | Prime Time

QUIZ  
PART-16

1. How many leap years are there from 2024 to 2099?  
A. 18  
B. 19  
C. 20  
D. 21 (B)

**Explanation:** Leap years come every 4 years here: 2024, 2028, ..., 2096. Counting them gives 19.

2. Which is the largest 4-digit palindrome divisible by 4?  
A. 9999  
B. 9889  
C. 8888  
D. 8008 (C)

**Explanation:** A number is divisible by 4 if its last two digits are divisible by 4. 88 is divisible by 4, so 8888 works and is the largest.

3. Which is the smallest 4-digit palindrome divisible by 4?  
A. 1001  
B. 1111  
C. 2002  
D. 2112 (D)

**Explanation:** The smallest 4-digit palindrome divisible by 4 is 2112 because its last two digits, 12, are divisible by 4.

4. The sum of two even numbers gives a multiple of 4 is:  
A. always true  
B. sometimes true  
C. never true  
D. only true for large numbers (B)

**Explanation:** Example:  $2 + 2 = 4$  is a multiple of 4, but  $6 + 4 = 10$  is not.

5. The sum of two odd numbers gives a multiple of 4 is:  
A. always true  
B. sometimes true  
C. never true  
D. true only for primes (B)

**Explanation:** Example:  $1 + 3 = 4$  is a multiple of 4, but  $1 + 5 = 6$  is not.

6. What is the remainder when 99 is divided by 5?  
A. 2  
B. 3  
C. 4  
D. 5 (C)

**Explanation:**  $99 = 5 \times 19 + 4$ , so the remainder is 4.

7. What is the remainder when 980 is divided by 10?  
A. 0  
B. 1  
C. 5  
D. 8 (A)

**Explanation:** A number ending in 0 leaves remainder 0 when divided by 10.

8. Which two divisibility checks are enough to confirm that 14560 is divisible by 2, 4, 5, 8, and 10?  
A. 2 and 5  
B. 4 and 5  
C. 8 and 10  
D. 2 and 10 (C)

**Explanation:** Divisibility by 8 ensures divisibility by 4, and divisibility by 10 ensures divisibility by 2 and 5.

9. Which of the following is divisible by all of 2, 4, 5, 8, and 10?  
A. 572  
B. 2352  
C. 5600  
D. 99 (C)

**Explanation:** 5600 ends in 0, so it is divisible by 10 and 5, and its last three digits 600 are divisible by 8.

10. Which two numbers have product 10000 and neither ends in 0?  
A. 20 and 500  
B. 25 and 400  
C. 16 and 625  
D. 40 and 250 (C)

**Explanation:**  $16 \times 625 = 10000$ , and neither number has 0 in the units place.