1

How many positive integers less than 30 are either a multiple of 2, an odd prime number, of the sum of a positive multiple of 2 and an odd prime?

A. 29
B. 28
C. 27
D. 25
E. 23

2

The sum of two numbers is 588 and their HCF is 49. How many such pairs of numbers can be formed?

A. 6
B. 5
C. 4
D. 3
E. 2

3

If the number x3458623y is divisible by 88, what is the value of x?

A. 1
B. 2
C. 3
D. 4
E. 5

4

When the product of 3,070,956 and n is divided by 720 there will be no remainder. If n > 1, what is the smallest value of n?

A. 10
B. 20
C. 30
D. 40
E. 60

5

If k is a positive integer, which of the following must be divisible by 24?

(A) (k – 4)(k)(k + 3)(k + 7)
(B) (k – 4)(k – 2)(k + 3)(k + 5)
(C) (k – 2)(k + 3)(k + 5)(k + 6)
(D) (k + 1)(k + 3)(k + 5)(k + 7)
(E) (k – 3)(k + 1)(k + 4)(k + 6)

6

What is the remainder when 9^1 + 9^2 + 9^3 +...+ 9^9 is divided by 6?

A. 0
B. 3
C. 2
D. 5
E. None of the above