## Factors and Multiples

1) Answer: D

Explanation: 3, 27, and 9 are all factors of 81 . They can be multiplied to another number to obtain 81

$$
\begin{gathered}
3 \times 27=81 \\
27 \times 3=81 \\
9 \times 9=81
\end{gathered}
$$

You can also try to divide 81 by 3,27 , and 9 . Notice that if you divide 81 by any of these numbers, there is no remainder. Hence, these numbers are divisible by 9.

## 2) Answer: A

Explanation: Let's use the listing method to determine the GCF of 35 and 70:

- Factors of 35: 1, 5, 7, 35
- Factors of 70: 1, 2, 5, 7, 10, 35, 70

The common factors of 35 and 70 are 5,7 , and 35 . The largest among the common factors is 35. Hence, the GCF of 35 and 70 is 35 .
3) Answer: D

Explanation: Since when you multiply $m \times n$ the result is 450 , then $m$ and $n$ are factors of 450. It follows that $m$ must be a factor of $450.90,45$, and 15 are all factors of 450 since:

$$
\begin{aligned}
& 90 \times 5=450 \\
& 45 \times 10=450 \\
& 15 \times 30=450
\end{aligned}
$$

## 4) Answer: C

Explanation: Let us list the multiples of 18 and 54:

- Multiples of $18-18,36,54,72, \ldots$
- Multiples of 54-54, 108, 162, ...

The common factor of 18 and 54 according to our lists is 54 . Hence, the LCM of 18 and 54 must be 54 .

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## 5) Answer: C

Explanation: The smallest even number that is also a prime number is 2 since 2 has only two factors: 1 and itself. Furthermore, take note that 2 is the only even number that is also a prime number (all even numbers except 2 are composite numbers).

