Objective #11

**Prime factorization** **(Page 1 of 2)**

**1.** Write 126 as a product of primes.

[A] $2^2 \cdot 3 \cdot 7$ [B] $2 \cdot 3^2 \cdot 5$ [C] $2^2 \cdot 3^2 \cdot 7$ [D] none of these

$$\begin{array}{r|l} 2 & 126 \\ \hline 3 & 63 \\ \hline 3 & 21 \\ \hline & 7 \end{array}$$

$= 2 \cdot 3^2 \cdot 7$

**2.** Which shows 1800 as a product of primes?

[A] $4 \times 3^2 \times 5^2$ [B] $2 \times 3 \times 5$ [C] $2^3 \times 3^2 \times 5^2$ [D] $2 \times 3^2 \times 5^2$

$$\begin{array}{r|l} 2 & 1800 \\ \hline 2 & 900 \\ \hline 2 & 450 \\ \hline 3 & 225 \\ \hline 3 & 75 \\ \hline 5 & 25 \\ \hline & 5 \end{array}$$

$= 2^3 \cdot 3^2 \cdot 5^2$