

## Exercise 14

In the following exercises, find the least common multiple of each pair of numbers using the prime factors method.

$$12, 16$$

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### Solution

Find the prime factorization of 12.

$$\begin{aligned} 12 &= 2 \times 6 \\ &= 2 \times 2 \times 3 \end{aligned}$$

Find the prime factorization of 16.

$$\begin{aligned} 16 &= 2 \times 8 \\ &= 2 \times 2 \times 4 \\ &= 2 \times 2 \times 2 \times 2 \end{aligned}$$

The number that has all factors from both numbers is  $2 \times 2 \times 2 \times 2 \times 3 = 48$ , so this is the least common multiple.