Factor Using the Distributive Property

If the terms in an expression share a common factor, you can "factor" that expression. That means you can rewrite it as a product. Let's try it with the expression 40 + 16.

First, find the greatest common factor (GCF) of 40 and 16. The GCF is 8. Then, you can rewrite the expression as a product using the distributive property.

$$40 + 16 = (8 × 5) + (8 × 2)$$
$$= 8(5 + 2)$$

Let's try another example: 15 + 24.
The GCF of 15 and 24 is 3. Rewrite the expression using the distributive property.

$$15 + 24 = 3(5 + 8)$$

Check your answer. Apply the distributive property to make sure you get the expression from before.

$$3(5 + 8) = 15 + 24$$

Write the GCF. Then factor using the distributive property. Check your answer by applying the distributive property.

8 + 12 GCF: __4__ 8 + 12 = __4(2 + 3)__	21 + 15 GCF: __3__ 21 + 15 = __3(7 + 5)__	20 + 30 GCF: __10__ 20 + 30 = __10(2 + 3)__
30 + 16 GCF: __2__ 30 + 16 = __2(15 + 8)__	27 + 36 GCF: __9__ 27 + 36 = __9(3 + 4)__	35 + 50 GCF: __5__ 35 + 50 = __5(7 + 10)__
32 + 48 GCF: __16__ 32 + 48 = __16(2 + 3)__	40 + 72 GCF: __8__ 40 + 72 = __8(5 + 9)__	56 + 42 GCF: __14__ 56 + 42 = __14(4 + 3)__