## Lesson 22: Combining Like Terms (Part 3)

### 22.1: Are They Equal?

Select **all**expressions that are equal to .

### 22.2: X’s and Y’s

Match each expression in column A with an equivalent expression from column B. Be prepared to explain your reasoning.

**A**

**B**

### 22.3: Seeing Structure and Factoring

Write each expression with fewer terms. Show or explain your reasoning.

### Lesson 22 Summary

Combining like terms is a useful strategy that we will see again and again in our future work with mathematical expressions. It is helpful to review the things we have learned about this important concept.

* Combining like terms is an application of the distributive property. For example:
* It often also involves the commutative and associative properties to change the order or grouping of addition. For example:
* We can't change order or grouping when subtracting; so in order to apply the commutative or associative properties to expressions with subtraction, we need to rewrite subtraction as addition. For example:
* Since combining like terms uses properties of operations, it results in expressions that are equivalent.
* The like terms that are combined do not have to be a single number or variable; they may be longer expressions as well. Terms can be combined in any sum where there is a common factor in all the terms. For example, each term in the expression has a factor of . We can rewrite the expression with fewer terms by using the distributive property:



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