## Unit 6 Lesson 8: Equivalent Quadratic Expressions

### 1 Diagrams of Products (Warm up)

#### Student Task Statement

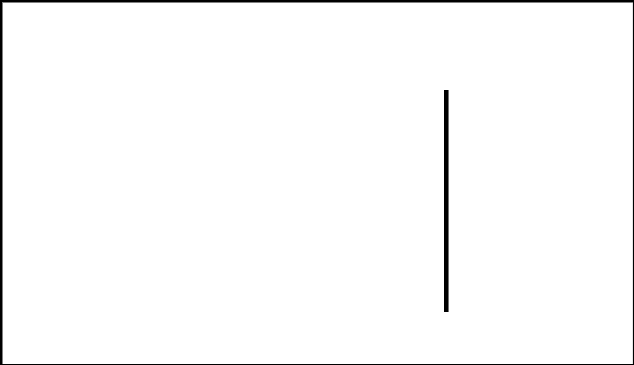


1. Explain why the diagram shows that .
2. Draw a diagram to show that .

### 2 Drawing Diagrams to Represent More Products

#### Student Task Statement

Applying the distributive property to multiply out the factors of, or expand, gives us , so we know the two expressions are equivalent. We can use a rectangle with side lengths and 4 to illustrate the multiplication.



1. Draw a diagram to show that and are equivalent expressions.
2. For each expression, use the distributive property to write an equivalent expression. If you get stuck, consider drawing a diagram.

* a.
* b.
* c.
* d.

### 3 Using Diagrams to Find Equivalent Quadratic Expressions

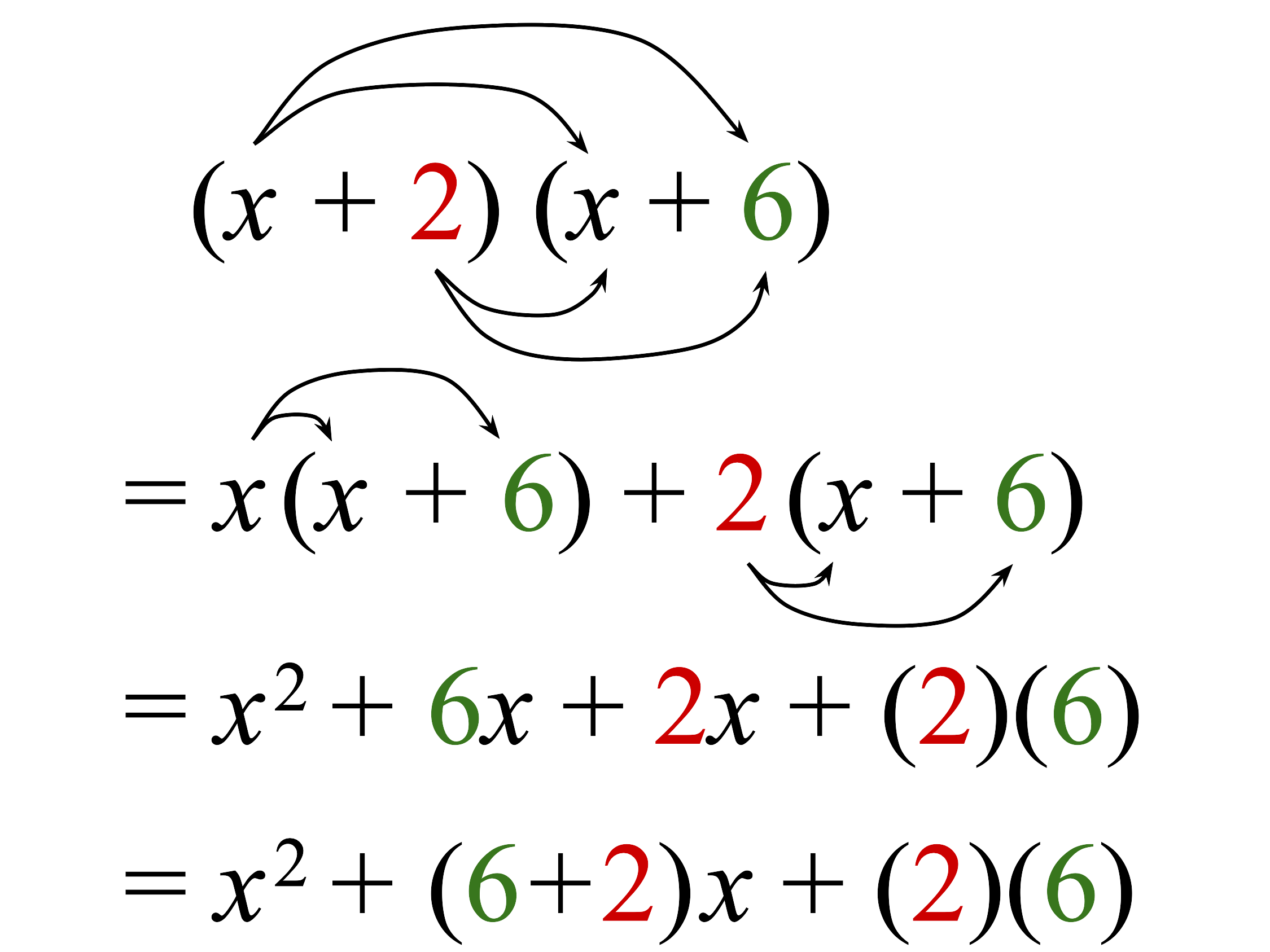
#### Student Task Statement

1. Here is a diagram of a rectangle with side lengths and . Use this diagram to show that and are equivalent expressions.

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1. Draw diagrams to help you write an equivalent expression for each of the following:
2. Write an equivalent expression for each expression without drawing a diagram:

#### Activity Synthesis





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