



Multiplying Binomials

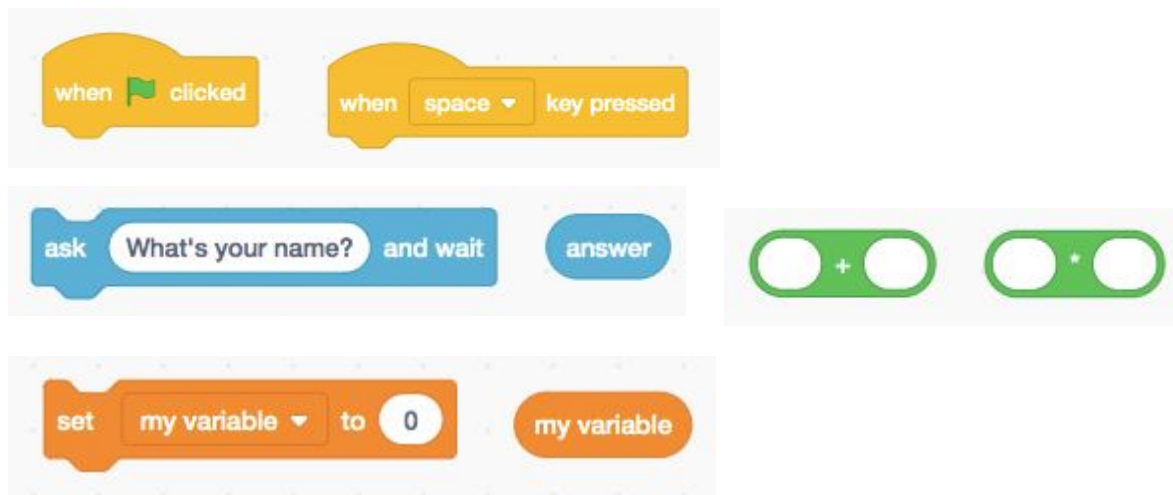
Project Goal:

Students will create a program that multiplies any two binomials. Students may use the area method or standard multiplying using the distributive method (sometimes referred to as foil).

Standard: [CCSS.MATH.CONTENT.HSA.APR.A.1](#)

Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.

Blocks:



Student Handout: [Multiplying Binomials Student Guide](#)

Teacher Video: [Multiplying Binomials Teacher Guide](#)

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Solution:

```
when space key pressed
set Coefficient x1 to 0
set Coefficient x2 to 0
set Constant to 0
set Constant1 to 0
set Constant2 to 0
set x to 0
set x^2 to 0
```

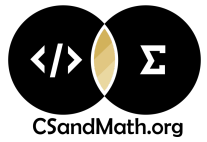
```
when clicked
ask "In the multiplied binomials what is the coefficient of the first x?" and wait
set Coefficient x1 to answer
ask "What is the first constant?" and wait
set Constant1 to answer
ask "In the multiplied binomials what is the coefficient of the second x?" and wait
set Coefficient x2 to answer
ask "What is the second constant?" and wait
set Constant2 to answer
set x^2 to Coefficient x1 * Coefficient x2
set x to Coefficient x1 * Constant2 + Coefficient x2 * Constant1
set Constant to Constant1 * Constant2
```

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Area Method:

```
when space key pressed
  set Box Constant to ?
  set Box x^2 to ?
  set Box x1 to ?
  set Box x2 to ?
  set Coefficient x1 to ?
  set Coefficient x2 to ?
  set Constant to ?
  set Constant1 to ?
  set Constant2 to ?
  set x to ?
  set x^2 to ?
```

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```
when clicked
ask "In the multiplied binomials what is the coefficient of the first x?" and wait
set Coefficient x1 to answer
ask "What is the first constant?" and wait
set Constant1 to answer
ask "In the multiplied binomials what is the coefficient of the second x?" and wait
set Coefficient x2 to answer
ask "What is the second constant?" and wait
set Constant2 to answer
wait 1 seconds
set Box x^2 to Coefficient x1 * Coefficient x2
set Box x1 to Constant1 * Coefficient x2
set Box x2 to Constant2 * Coefficient x1
set Box Constant to Constant1 * Constant2
```

```
wait 1 seconds
broadcast Show 1 and wait
set x^2 to Coefficient x1 * Coefficient x2
wait 2 seconds
broadcast Show 2 and wait
set x to Coefficient x1 * Constant2 + Coefficient x2 * Constant1
wait 2 seconds
broadcast Show 3 and wait
set Constant to Constant1 * Constant2
```

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