*Would You Rather ...*

Learning Goals:

Identify different representations of polynomial products

Model binomial by trinomial multiplication using an area model

 Compare the area model to the FOIL method

1. Play with the screen of the [Area Model Algebra simulation](https://phet.colorado.edu/en/simulation/area-model-algebra) for a few minutes, then record three things you discovered.

A.

 B.

 C.

2. Play with the  screen of the [Area Model Algebra simulation](https://phet.colorado.edu/en/simulation/area-model-algebra), then record three “new” things you discovered. Have you clicked on ALL the buttons, checked ALL the boxes, open/closed ALL the windows, explored ALL the drop down options?

A.

 B.

 C.

3. What do you wonder about this simulation? Make a prediction about what you will see on the next screen, called Variable. Share your ideas with a partner.

4. Try a few problems using both strategies. The simulation can be used to check your work. Record both a pro and a con for each method for both types of problems.

|  |  |  |
| --- | --- | --- |
| Problem | Multiply using FOIL method | Multiply using area model |
| (x + 12)(x + 3) |  |  |
| Which strategy would you rather use and why? | Pro - Con -  | Pro -Con - |
| (2x - 5)($x^{2}$+ 5x - 7)  |  |  |
| Which strategy would you rather use and why? | Pro - Con -  | Pro -Con - |

6. *Would you rather* use the FOIL method or the area model? List 3 reasons why the FOIL method is better and 3 reasons why the area model is better.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Reason #1 | Reason #2 | Reason #3 |
| FOIL method |  |  |  |
| Area model |  |  |  |