Get Creative with Polynomials (30 points)

In this project you will use your imagination to create a building or outside space (e.g., park, zoo habitat, space station, museum, sports complex). There are four parts to complete:

- **Math** – Find the area of your construction in terms of an unknown value. All dimensions used to find the total area, whether length, width, or radius, must be represented by linear binomials.
- **Writing** – Describe how you derived your linear binomials, what your variable and constant terms represent, and how the side lengths relate to one another. Explain how you arrived at your final polynomial, i.e., explain how you used FOIL or a special product formula to arrive at your final polynomial. Describe the purpose of the construction, how people will use it, and the benefits of the design (why did you choose a rectangular or circular layout?).
- **Drawing** – Draw a view of your construction from above to show the arrangement of rooms or spaces. Label your drawing with the measurements and the names of the rooms or spaces.
- **Display** – Display your work neatly and creatively on a poster board.

Rubric

Math

_____ Design includes two linear binomials that are multiplied together to find the area (3)

_____ Area is correctly expressed as a simplified polynomial and all work is shown (5)

_____ Units are included - arbitrary unit^2 is fine (1)

Writing

_____ Two paragraphs, complete sentences, typed, correct grammar and spelling (3)

_____ Describes what the terms in the linear binomial represent (2)

_____ Describes the steps involved in writing the final polynomial (2)

_____ Describes the purpose and use of the construction and the benefits of the design (2)

Drawing

_____ Used a ruler and/or compass – neatly presented (2)

_____ All measurements needed to write the linear binomials and final area polynomial are listed (2)

_____ All elements (rooms, sections, areas) are labeled with descriptive terms (2)

Display

_____ All elements, including a title, are arranged neatly on the board (4)

_____ Board is embellished with relevant photos or drawings (1)

_____ Sources are cited (ideas, quotes, and images) (1)