**Volume Project: Backyard Landscaping**

You have been hired by your aunt to landscape her backyard. You have been given a budget of **$3,000.**

You will **be paid** **any money that is left over** once everything has been paid for.

You need to do the following tasks, and keep track of how much money you spend to do them.

1. Dig a hole for **an in-ground pool** (cylindrical or rectangular prism)
   * must build walls on all sides and a bottom out of concrete (minimum ¼ ft or 0.25 ft thick)
   * remove the dirt, pour concrete, then fill pool with water
   * **Minimum pool volume = 400 ft3 water**
2. Build an **above-ground garden** (1 Rectangular prism or 2 triangular prisms)
   * Must build walls on all sides out of concrete (minimum ¼ ft or 0.25 ft thick)
   * Pour the concrete, then fill with dirt
   * **Minimum combined volume = 100 ft3 dirt**
3. Build **three different shaped planters** for flower beds,
   * All 3 planters MUST be different shape (cylinder, triangular prism, and rectangular prism)
   * Must build walls out concrete. (minimum ¼ ft or 0.25 ft thick)
   * Pour the concrete, the fill with dirt
   * **Minimum combined volume = 100 ft3 dirt**

Draw out your plan for the backyard, as well as a picture for each item you must calculate the volume for.

Show all calculations for volume, and prices.

**PRICES:**

* Dirt removal - $2.50 per ft3
* Dirt addition - $ 1.50 per ft3 to bring in **new dirt**
* Concrete - $5.00 per ft3
* Water - $0.50 per ft3

**ANSWER ONCE YOU ARE FINISHED:**

REFLECT: Is there anything you would / could have done differently to allow you to make more money? Explain.