

## Optimization Assignment

### 0.1. Group 1. Members:

- Matt S
- Matt A
- Haley M
- Diana F

**Problem:** Section 4.7, problem 16

**Solution:** (\$163.54)

### 0.2. Group 2. Members:

- Noah D
- Justin G
- Julianne M
- Mirousse P
- Katie R

**Problem:** Section 4.7, problem 32

**Solution:**

$$\text{solution: width} = \frac{60}{4 + \pi} \quad \text{height} = \frac{30}{4 + \pi}$$

### 0.3. Group 3. Members:

- Hanna B
- George F
- Mike G
- Kerry H

**Problem:** Section 4.7, problem 35

**Solution:** Ans: Maximum: all wire used for square Minimum: dimension of square is  $(40\sqrt{3}/9 + 4\sqrt{3}) \approx 4.35m$

**0.4. Group 4. Members:**

- Ashley F
- Brian G
- Brittany L
- Alexandra M
- Tom S

**Problem:** Section 4.7, problem 36

**Solution:** Ans: Maximum: all wire used for circle Minimum: dimension of square is  $40/(4 + \pi)$

**0.5. Group 5. Members:**

- Kaylie B
- Ashley G
- Brittany M
- Kate M
- Mike T

**Problem:** Section 4.7, problem 33

**Solution:**

$$80 \frac{\text{cm}^3}{\text{min}}$$