# Mission-Simulation Assignment
# Operation Uni-Calculation - Answer Key

Coach needs to buy new uniforms for the 5 starters on his basketball team. Each uniform will have the player's name and number on the back. The uniform maker, Rugged Uniforms, charges a base price for the uniform itself. They also have additional costs depending on the number of letters and numbers on each jersey.

**COACH'S CRUSHERS**

| Player Name | Player # |
|---|---|
| Trung | 9 |
| Everitt | 18 |
| Porter | 2 |
| Nubkwe | 31 |
| Olsavsky | 7 |

**Rugged Uniforms**
**Price List**

| Item | Cost |
|---|---|
| Basketball Uniform | $25.00 |
| Cost per letter | $0.75 |
| Cost per number | $1.25 |

**Step A**

Create an algebraic expression to represent the cost of **one** uniform.

$$\$25 + (\$0.75 \times L) + (\$1.25 \times N)$$

**Step B**

- Use what you know about algebraic expressions to explain how you created your expression for the cost of one uniform. Use words, numbers, drawings, and/or symbols to explain your thought process to your fellow AVU agents.

- Use your expression to find the player with the most expensive uniform and the least expensive uniform. Use words, numbers, and/or symbols in your explanation.

**Part 1** - Students should mention that the cost of the uniform remains constant at $25 for all uniforms. The number of letters in a player's name (represented by a variable) should be multiplied by $0.75. The number of uniform digits (**not** the number itself!), represented by a **different** variable, should be multiplied by $1.25.

**Part 2** - See calculations below. **Trung's** uniform is the least expensive, while **Everitt's** uniform is most expensive. Students should show calculations for all 5 players **or** explain how they were able to estimate to eliminate some players.

| Trung | Everitt | Porter | Nubkwe | Olsavsky |
|---|---|---|---|---|
| 25 + (.75*5) + (1.25*1) | 25 + (.75*7) + (1.25*2) | 25 + (.75*6) + (1.25*1) | 25 + (.75*6) + (1.25*2) | 25 + (.75*8) + (1.25*1) |
| 25 + 3.75 + 1.25 | 25 + 5.25 + 2.50 | 25 + 4.50 + 1.25 | 25 + 4.50 + 2.50 | 25 + 6.00 + 1.25 |
| **$30.00** | **$32.75** | **$30.75** | **$32.00** | **$32.25** |