

# Score Sheet for 2016 Fluor Engineering Challenge

## Sorting points

Your goal is to sort 6mm spheres into cup A and 12mm spheres into cup B. First, count the beads that landed in each cup. Do not count spheres that get stuck in the machine or do not land in a cup.

Number of 6mm beads in cup A	
Number of 12mm beads in cup B	
Total number of <b>correctly</b> sorted beads	
Number of 6mm beads in cup B	
Number of 12mm beads in cup A	
Total number of <b>incorrectly</b> sorted beads	

Then, use this equation to calculate your sorting points. Fill in your values from the table to do the calculation:

$$\begin{aligned} \text{Sorting points} &= 200 \times (\text{Correctly sorted beads} - \text{Incorrectly sorted beads}) \\ \underline{\hspace{2cm}} &= 200 \times (\underline{\hspace{2cm}} - \underline{\hspace{2cm}}) \end{aligned}$$

## Material points

Count how many cups, popsicle sticks, and sheets of paper you used to build your machine. Do not count the 3 cups that you used to pour and collect the spheres.

$$\begin{aligned} \text{Material points} &= 150 \times (\# \text{ of cups used}) + 30 \times (\# \text{ of popsicle sticks used}) + 75 \times (\text{sheets of paper used}) \\ \underline{\hspace{2cm}} &= 150 \times \underline{\hspace{2cm}} + 30 \times \underline{\hspace{2cm}} + 75 \times \underline{\hspace{2cm}} \end{aligned}$$

## Time points

Use a stopwatch to time how long it takes from when you start pouring the beads until the last bead falls into a cup or out of the machine.

$$\begin{aligned} \text{Time points} &= 50 \times \text{time in seconds} \\ \underline{\hspace{2cm}} &= 50 \times \underline{\hspace{2cm}} \end{aligned}$$

## Total Score

$$\begin{aligned} \text{Total score} &= \text{Sorting points} - \text{Material points} - \text{Time points} \\ \underline{\hspace{2cm}} &= \underline{\hspace{2cm}} - \underline{\hspace{2cm}} - \underline{\hspace{2cm}} \end{aligned}$$