**Amplify Oshkosh – Wi-Fi Video Worksheet**

**Part I Intro and Area**

Challenge: Provide a design for Wi-Fi service throughout the arena for all our guests.

Questions to accomplish this task:

Find the Area of the Arena with the following information provided:  
 Length of 230 ft   
 Height of 244 ft

Given the diameter of the access point, 55.14, find the total square feet of the AP.  
 Equation: π **r**2= square feet of circle

Taking into consideration the size of the arena, how many AP’s are needed?  
 Equation: Area of Arena / Area of AP

**Part II Density**

How would density impact the number of access points needed?

Calculate Utilization given the following information:

The max capacity of the Arena is 3,000 guests.   
25 percent of the users are active at one time.  
Industry standard is to double the expected usage to avoid issues.

**Part III: Budget**

Identify the best option while staying within the budget amount.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Person | Total AP | Cost | Total People | Total Cost |
| 20 |  | $500.00 |  |  |
| 60 |  | $1,500.00 |  |  |
| **Totals** |  |  |  |  |
|  | | | | |
| Budget | | | | **$40,000** |

**Follow Up Question:**

Brainstorm a few real life coverage situations that may occur while installing the AP’s.

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