6.05 Volume and Figures Activity Template

**Directions*: Use the given dimensions for a cereal box and Pinecone to complete the three calculations. Then answer the reflection questions and submit to 6.05 for grading

****Don't forget to show all work for your calculations****

Round all answers to the nearest hundredth & use 3.14 for π

6.05 Help Video(click here)

Object 1: Cereal Box	**Object 2**: Pinecone
3D shape: Rectangular Prism	3D shape: Cone
Dimensions: length = 10 inches width = 6 inches height = 2.75 inches	Dimensions: radius = 2 inches height = 8.5 inches

Calculations 1: Base Area

Base of Object 1 (2-d shape) :	Base of Object 2 (2-d shape):
Formula for Area:	Formula for Area:
Base Area:	Base Area:

Calculations 2: Volume

Object 1 3D shape: Rectangular Prism (cereal box)	Object 2 3D shape: Cone (Pinecone)
Volume Formula:	Volume Formula:

Volume:	Volume:

Calculations 3: Surface Area

Object 1 3D shape: Rectangular Prism (cereal box)	Object 2 3D shape: Cone (Pinecone)
SA Formula:	SA Formula:
Surface Area:	Surface Area:

Reflection:

Question 1: What should your units on your base **area** calculations be, and why? How is this different from the units on your **volume** calculations?

Question 2: If you were to take a cross-section parallel to the base for one of your items, what shape would you see? Can a cross-section be a sphere? Explain in two to three sentences.

***Grading Rubric:**

Calculations (15/15)- All work is submitted, and all calculations are correct.

Reflection Questions (5/5)- All questions were answered, and all had well-thought-out and knowledgeable responses.