In Metrics We Trust

Eagle STEM Scrimmage

Team Name	
Team Number	
Student(s) Name	

Station 1

Tasks:

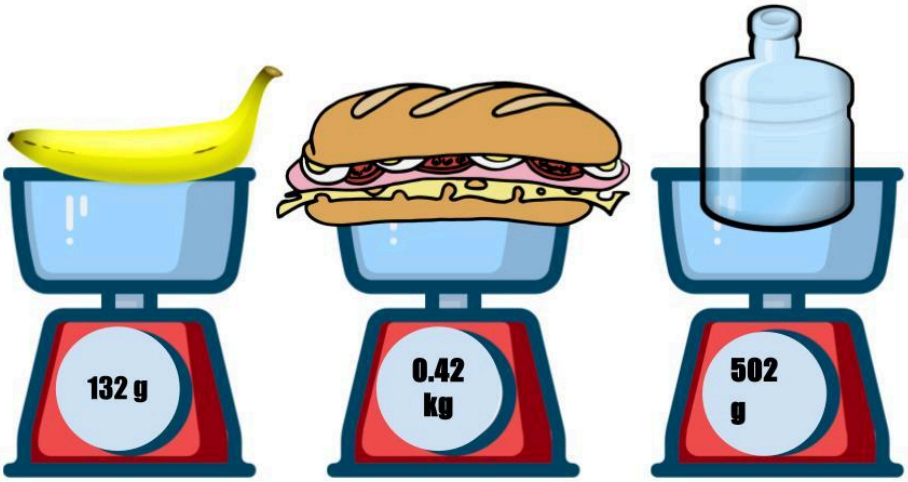
1. What is the length of the Apple to the nearest **millimeter**

2. Which metric unit is most appropriate to measure:
   a. A pencil
   b. A paper clip
   c. The length of a classroom

3. Convert 34 cm into mm.

4. A student claims 1 m = 1000 cm. Explain why this is incorrect.

Station 2



Tasks:

1. Order the three foods from **lightest to heaviest**.

2. Convert the mass of the sandwich into grams.

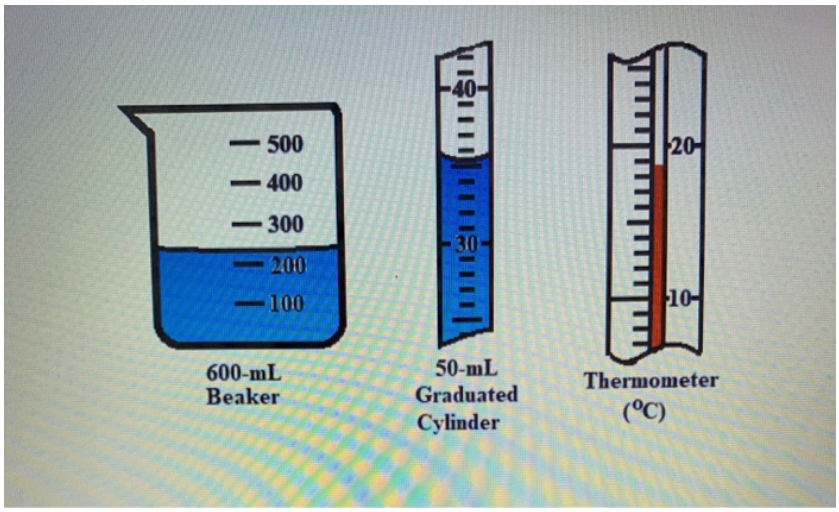
3. Which unit (mg, g, kg) would best describe:
    - A grain of salt
    - A whole pumpkin
    - A paperclip

4. If you combine the banana and water bottle, what is their total mass?

5. A recipe requires **1 kilogram** of ingredients. How many bananas (132 g each) would be needed to pass 1 kg?

Station 3

Observe the following images.



1. What is the volume shown in the graduated cylinder? Where is its meniscus?

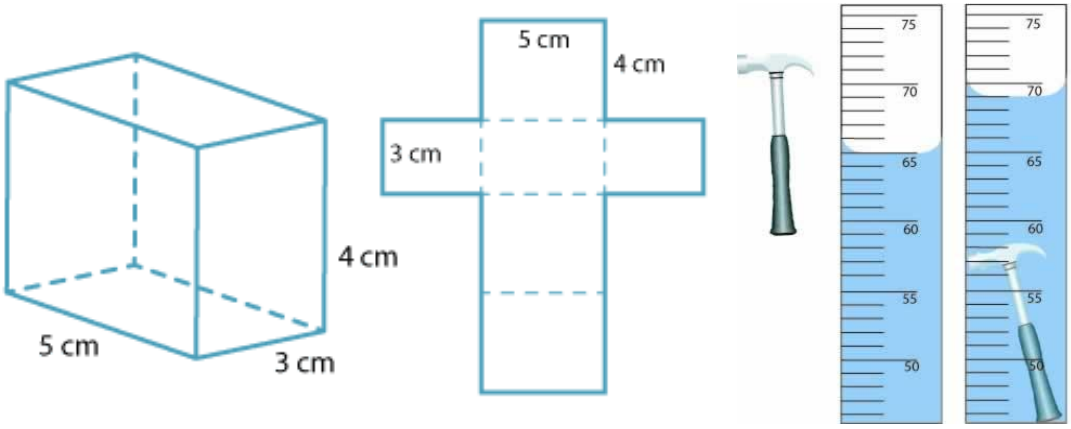
2. If you pour the graduated cylinder's water into the beaker, about how much more water is needed to reach 300 mL?

3. Estimate the volume in the cup, assuming it is to scale with the graduated cylinder and beaker. Give evidence.

4. Convert 0.25 L into mL.

Station 4

Observe the following images.



1. Calculate the volume and surface area of the rectangular prism.

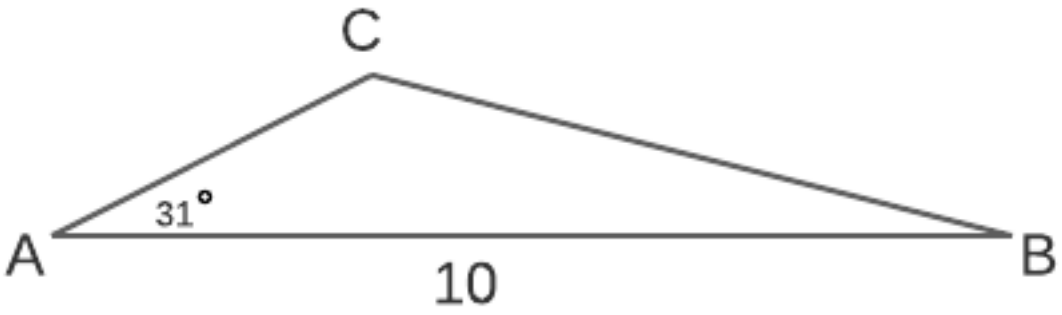
2. Calculate the hammer's volume using water displacement.

3. A student says the stone's volume is "38 cm^2." Explain the mistake in the unit.

4. Which unit is best for solid volume in: **cm^3 or mL**? Why?

Station 5

Observe the following images.



1. Identify the type of triangle given.

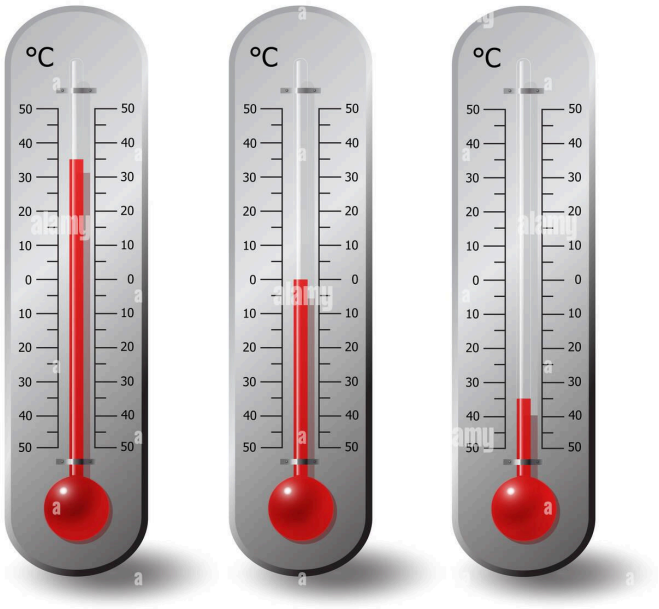
2. Classify each angle (acute, right, obtuse, straight, reflex).

3. Draw a **90° angle, a 45° angle, and a 180° angle** using the correct lines and indications.

4. If Angle A is 31° and Angle C is double Angle A, how many degrees is Angle B?

Station 6

Observe the following images.



Tasks:

1. Record the temperatures shown.

2. Which temperature is closer to typical body temperature?

3. Match each setting to the most reasonable Celsius temperature:
    - Snow

    - Classroom

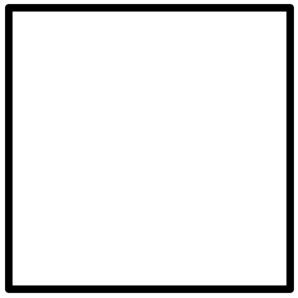
    - Warm dishwater

4. Convert 25°C to Kelvin

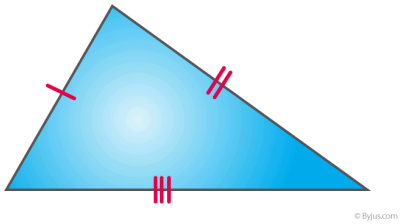
Station 7

Observe the following images.

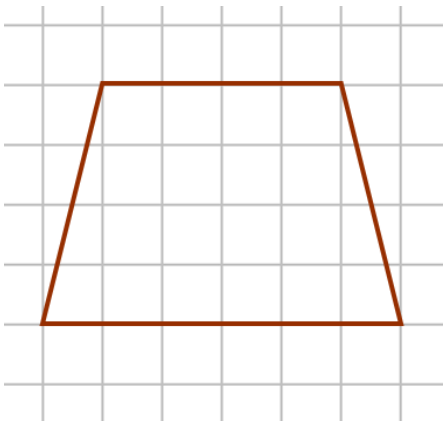
Shape 1:



Shape 2:



Shape 3:



1. **Identify each shape**

2. Identify which shapes have right angles.

3. Which shapes have at least one pair of parallel sides?

4. For Shape 3, Identify any relationships seen between its line segments.

5. For the Shape 3: estimate the area using the grid behind it (1-cm squares).

Station 8

1. Put these units in order from smallest to largest: m, mm, km, cm.

2. A student measures a book as **0.3 m** long. Convert to cm.

3. Convert 5000 mg to g.

4. Explain why scientists prefer metric over customary units in measurement competitions.

5. A bottle holds 1.5 L. How many mL is this?