

Birdhouse Construction Lab (for Bonus Points) Metrics and Measurement

PURPOSE:

To become more familiar with metrics in measurement, to use the factor label method to convert to centimeters, and to use significant figures in measurement

SAFETY:

Be careful when cutting pieces of birdhouse. If you construct a wooden birdhouse please have adult supervision while cutting and constructing the house.

GRADING CRITERIA:

+9 bonus points if you construct the birdhouse out of cardboard

+15 bonus points if you construct the birdhouse out of wood

MATERIALS (for cardboard birdhouse):

Metric ruler

Old cardboard boxes

Masking tape

Glue

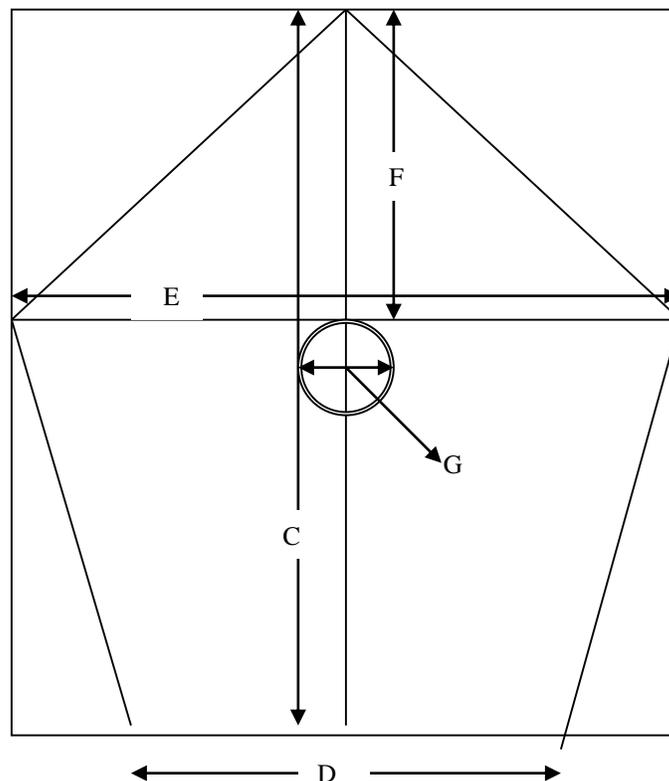
PROCEDURE:

1. Convert all measurements in the Data Table to centimeters. **Show all your work on the data table. If you do not show work you will receive NO credit. The work must be done using dimensional analysis!!!**
2. Use a metric ruler to draw your measurements on cardboard.
3. Label and cut out the pieces.
4. Glue or tape the sides to the back. Then attach the floor and the front.
5. The roof is made by butting the short side against the long one and attaching them together.
6. Glue the roof to the front and back pieces.

Measurement Hints:

1. All A & B measurements will form rectangles.
2. Measurements C-G form the five-sided front and back to the birdhouse. See Figure 1 for identification of these measurements.

Figure 1



Data:

| Piece | Dimensions | Conversion to cm (use factor label method and show work) | Answer with Correct Number of Significant Digits |
|--------------------------|-----------------|--|--|
| Side 1 | A 5.875 inches | | |
| | B 0.1016 meters | | |
| Side 2 | A 0.4896 feet | | |
| | B 4.00 inches | | |
| Back | C 0.250 yards | | |
| | D 0.3333 feet | | |
| | E 171.5 mm | | |
| | F 0.0857 meters | | |
| Front | C 2.286 dm | | |
| | D 0.1111 yards | | |
| | E 6.75 inches | | |
| | F 0.28125 feet | | |
| | G 22.2 mm | | |
| Floor | A 4.00 inches | | |
| | B 95.3 mm | | |
| Roof (long side) | A 6.00 inches | | |
| | B 0.0001842 km | | |
| Roof (short side) | A 1.524 dm | | |
| | B 0.1944 yards | | |