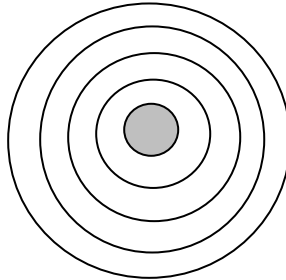


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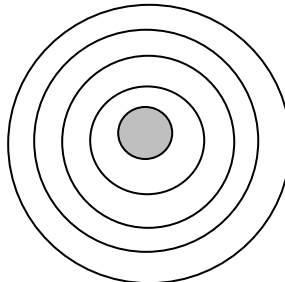
Accuracy and Precision HW

1. Define the terms "accuracy" and "precision".

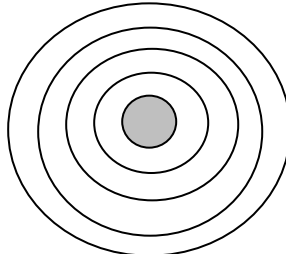
2. Draw a target diagram that shows high precision but low accuracy



3. Draw a target diagram that shows high accuracy but low precision



4. Draw a target diagram that shows both high accuracy and precision



5. Each of five students used the same ruler to measure the length of the same pencil. These data resulted: 15.33 cm, 15.34 cm, 15.33 cm, 15.33 cm, 15.34 cm. The actual length of the pencil was 15.85 cm. Describe the accuracy and precision for these measurements.

6. Mr. Andrej asks you and two of your classmates to determine the mass of a sample of aluminum (Al). Mr. Andrej also weighs the mass of aluminum. You perform the weighing three times, and obtain the following data: 6.74, 6.70, and 6.71 g. The actual value is 6.70 g. Here are the other results:

Classmate #1: 6.50, 6.49, and 6.52 g

Classmate #2: 6.57, 6.82, and 6.71 g

Andrej: 6.61, 6.70, and 6.87 g

a) Graph all four sets of data.

b) Which results are most precise? Explain!

(c) Which results are most accurate? Explain!

(d) Which results have the highest accuracy *and* precision? Explain!

