

ME 354 Mechanics of Materials Laboratory

In-class group project 1

Date _____

Group members _____

Define the following terms (one or a few words is sufficient)

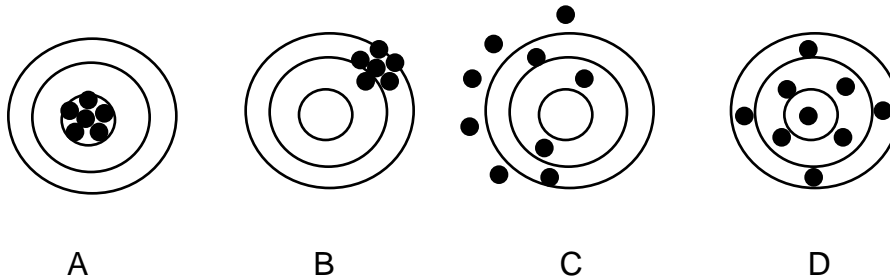
Precision _____

Accuracy _____

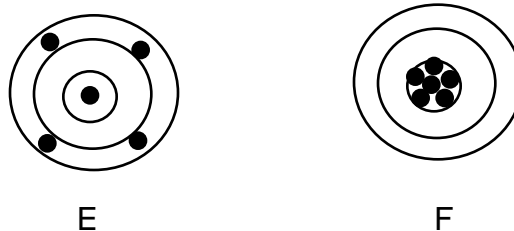
Significant Figure _____

Measurement _____

For each figure below, state the level of accuracy and state the level of precision

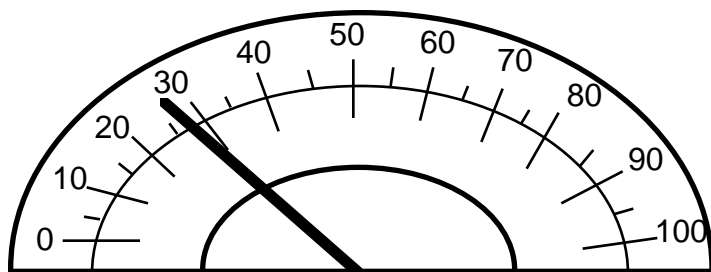


For figures E and F, if one were to calculate the statistics (mean and standard deviation) what could be said about the accuracy and precision of each. If reliability is defined as the prediction of accuracy and precision for the future, which marksmen (the one making E or the one making F) would you consider more reliable?



[Over]

For the automobile speedometer shown below, what is your estimate of the speed? How many significant figures are in the reading? Justify your answer.



For each number, determine the number of significant figures for the information given.

45.1 _____ significant figures

4.51 _____ significant figures

0.00451 _____ significant figures

45.1×10^8 _____ significant figures

5,255 _____ significant figures

3,400 _____ significant figures

0.370 _____ significant figures

_____ significant figures

Round the following numbers to the required level of significant figures.

5.386 to three and then to two significant figures _____

5.213 to three and then to two figures _____

24.475 to four, then three and then to two significant figures _____