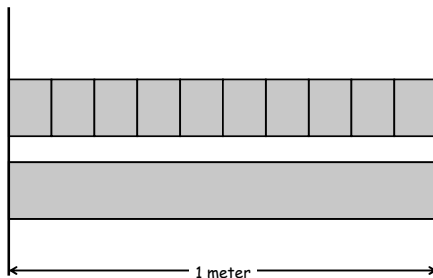


Significant Figures and Measuring Devices

CHM 101

Sinex

Two identical length rulers with different calibrations.



Significant Figures (SF) -
Every digit you are sure of plus
one place estimated

What is the length? _____

What is the width? _____

Calculate the area of the box ($L \times W$).

When multiplying/dividing: fewest number of SF's rules

Calculate the perimeter of the box ($2L + 2W$).

When adding/subtracting: least number of decimal places rules

How would you improve your results?

What is the length? _____

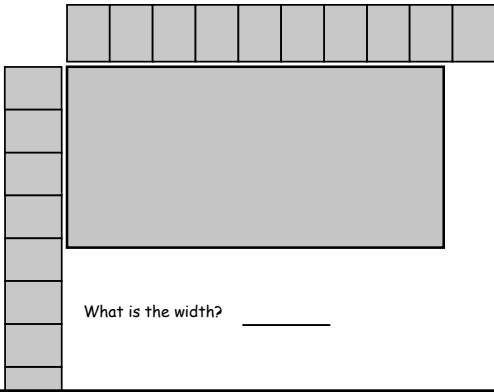
What is the width? _____

Calculate the area of the box ($L \times W$).

Calculate the perimeter of the box ($2L + 2W$).

How would you improve your results?

What is the length? _____



What is the width? _____

Calculate the area of the box ($L \times W$).

Calculate the perimeter of the box ($2L + 2W$).

How would you improve your results?

For any measuring device you can read it to one place better than it is calibrated.

Thermometer -
Calibrated to every 1 degree
Read to every 0.1 degree

Buret -
Calibrated to every 0.1 mL
Read to every 0.01 mL