

- Find the difference in **order of magnitude** for the following comparison: The size of the atom to the size of the nucleus.
- Convert 500 km h^{-1} to m s^{-1} .
- Estimate how many kilograms are in a 225-pound person. ($1 \text{ kg} = 2.2 \text{ lbs}$) – No calculator
- Convert the quantity 125 km into its equivalent in mm.
- Find the line's length to the maximum number of significant figures allowed by the centimeter ruler.



- Determine the number of significant figures in each of the following.

(a) 0.0015	___	(b) 0.15	___	(c) 1.500	___	(d) 1.0005	___
(e) 1.00050	___	(f) 0.00010000	___	(g) 6.35×10^6	___	(h) 160×10^{-21}	___
- Compute the following quantities to the correct number of significant figures.

(a) 5.0000×2	(b) 5.0000×2.0	(c) $2.5 \times 10^{-2} - 2.5$	(d) $2.5 \times 10^{-2} - 2.50$
_____	_____	_____	_____
(e) $2.5 \times 10^{-2} - 2.500$	(f) $5.0000 \div 2$	(g) $2.5 \times 10^{-2} - \pi$	(h) $2.50 \times 10^{-2} \div 4.50$
_____	_____	_____	_____