**Significant Figures**

***Instructions****: Identify the number of sig figs in numbers and practice using them in calculations.*

1. ***Estimate*** the size of each of the following to two significant figures (do not use any measuring tool or a calculator!):

|  |  |  |  |
| --- | --- | --- | --- |
| **a.** | The mass of a large orange |  | **g** |
| **b.** | Diameter of a basketball |  | **cm** |
| **c.** | Volume of the classroom sink |  | **m3** |

1. State the number of significant figures in each of the measurements in the table below, then express each of the values in scientific notation to two significant figures.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Measurement** | **Number of significant figures** | **In scientific notation to 2 sig. figs.** |
| **a.** | 0.0060 kg |  |  |
| **b.** | 1.0610 m |  |  |
| **c.** | 4086 km |  |  |
| **d.** | 462.52 J |  |  |

1. Complete each of the following calculations, giving your answers in the appropriate number of significant figures. Include appropriate units with your answers.
	1. $4.62 cm+8.9561 cm+5.9 cm= $
	2. $46.9 cm ×12.4 cm ×5.6 cm=$
	3. $\left(6.4 m+5.92 m-4.3 m\right)÷2.25 s=$
	4. Calculate the area of a square with sides of 5.6 cm:
	5. Calculate the volume of a marble with a radius of 1.905 cm:

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