

Example 3

What excited state electrons configuration of Sodium ion?

- A. $1s^2 2s^2 2p^5 3s^1$
- B. $1s^2 2s^2 2p^6 3s^1 3p^1$
- C. $1s^2 2s^2 2p^6$
- D. $1s^2 2s^2 2p^6 3s^2 3p^3$
- E. $1s^2 2s^2 2p^6 3s^2 3p^6$

Sodium
11
Na
22.990

Calculation

- Significant figure and Decimal

Number	Significant figure	Decimal
0.236		
2.01		
3.20		
20.00		

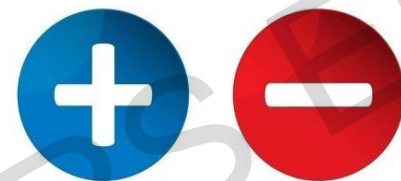
Calculation



Lowest Significant Figure

$$2.22 \times 0.4 = 0.888$$

$$2.22 \times 0.4 \approx 0.9$$



Lowest Decimal

$$2.22 + 0.4 = 2.62$$

$$2.22 + 0.4 \approx 2.6$$

Example 3

The following data were collected to determine the density of a liquid.

Mass of bottle filled with liquid	21.245 g
Mass of empty bottle	10.234 g
Volume of liquid in bottle	11.0 mL

The density of the liquid is best recorded as

- A. 0.1 g/mL
- B. 1 g/mL
- C. 1.0 g/mL
- D. 1.00 g/mL
- E. 1.001 g/mL

Example 4

The following data were collected to determine the density of insoluble compound X. liquid.

Mass of beaker and compound X	24.285 g
Mass of empty beaker	16.492 g
The volume of compound X	1.47 mL

The density of the compound X is best recorded as

- A. 2.176 g/mL
- B. 3.745 g/mL
- C. 5.34 g/mL
- D. 5.340 g/mL
- E. 0.12 g/mL