**Example of How to Calculate the**

**Percent Change of Volume in a Gummy Bear**

**Initial Volume (Vi) of Gummy Bear**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gummy Bear** | **Length (l)** | **Width (w)** | **Depth (d)** | **Initial Volume (Vi)** |
| Blue | 1.8 cm | 1.3 cm | 1 cm | **2.34 cm3** |

Vi = l x w x d

Vi= 1.8 cm x 1.3 cm x 1 cm

Vi= **2.34 cm3**

**Final Volume (Vf) of Gummy Bear**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gummy Bear** | **Length (l)** | **Width (w)** | **Depth (d)** | **Final Volume (Vf)** |
| Blue | 3.7 cm | 1.8 cm | 1.4 cm | **9.32 cm3** |

Vf = l x w x d

Vf= 3.7 cm x 1.8 cm x 1.4 cm

Vf= **9.32 cm3**

**Percent Change in Volume**

Percent Change = final volume (Vf) – initial volume (Vi) X 100%

 initial volume (Vi)

*\*Remember: Vi of blue gummy bear = 2.34 cm3*

 *Vf of blue gummy bear= 9.32 cm3*

Percent change of gummy bear = Vf - Vi X 100%

 Vi

 = 9.32 cm3 – 2.34cm3 X 100%

 2.34 cm3

= 6.98 cm3 X 100% 2.34 cm3

 = 2.98 cm3 X 100

= **298% (round to nearest 50th) 🡪 300%**

\*This means that the blue gummy bear experienced a 300% change in its volume after being soaked in water for 24 hours.