**Catching the Perfect SAR Waves: Radar System Evaluation**

**ANSWER KEY**

**Instructions: Using your “Radar” System find the missing distance. Verify the distance using the Pythagorean Theorem. Provide both answers then calculate the percent error.**

**Formulas:** $Pythagorean Theorem: a^{2}+b^{2}=c^{2}$

$$Percent Error=\left(\frac{Theoretical Value-Experimental Value}{Theoretical Value}\right)× 100$$

|  |  |  |
| --- | --- | --- |
| **Theoretical B = 20 cm** | **Theoretical B = 87 cm** | **Theoretical B = 48 cm** |
| **Theoretical B = 60 cm** | **Theoretical B = 32 cm** | **Theoretical B = 35 cm** |

**Note: Experimental Values will vary slightly based on sensor calibration.**