

## **QUADRATIC EQUATION FOR DETERMINING APPLIED FORCE WHEN B IS POSITIVE**

The following formula can be used to calculate the force applied to the Proving Ring or Load Cell. Before using this formula the Proving Ring reading should be corrected for temperature and the no load reading.

$$L = \frac{2 * (D - A)}{B + \sqrt{B^2 - 4C * (A - D)}}$$

Where:

- L = Applied Force
- A = A Coefficient from Calibration Report
- B = +B Coefficient from Calibration Report
- C = C Coefficient from Calibration Report
- D = Net Indication in Div. after subtracting average no load reading and correcting for temperature.

## **QUADRATIC EQUATION FOR DETERMINING APPLIED FORCE WHEN B IS NEGATIVE**

The following formula can be used to calculate the force applied to the Proving Ring or Load Cell. Before using this formula the Proving Ring reading should be corrected for temperature and the no load reading.

$$L = \frac{2 * (D - A)}{B - \sqrt{B^2 - 4C * (A - D)}}$$

Where:

- L = Applied Force
- A = A Coefficient from Calibration Report
- B = -B Coefficient from Calibration Report
- C = C Coefficient from Calibration Report
- D = Net Indication in Div. after subtracting average no load reading and correcting for temperature.