

200604041624

Name KeyDetermine $\sqrt[8]{2}$ using logarithms.1ST Look up the log of 2

$$\text{Log } 2 = 0.301029995$$

2ND Since we need the 8th root, divide the Log 2 by 8.

$$\text{Log } \sqrt[8]{2} = \frac{\text{Log } 2}{8} = \frac{0.301029995}{8}$$

$$\text{Log } \sqrt[8]{2} = 0.037628749$$

3RD Determine the antilogarithm which means to find the number that has a logarithm of 0.037628749

$$\sqrt[8]{2} = \text{antilog}(0.037628749)$$

$$\boxed{\sqrt[8]{2} = 1.090507733}$$

Note

$$(1.090507733)^8 = 2$$