

The Cubic Equation is defined as:

$$x^3 + Px = Q.$$

If its roots are defined by:	and $\Delta$ is defined by:
$x = \sqrt[3]{\sqrt{\Delta} + \frac{Q}{2}} - \sqrt[3]{\sqrt{\Delta} - \frac{Q}{2}},$	$\Delta = \frac{Q^2}{4} + \frac{P^3}{27}$

Using the given data of P = 6; Q = 7

$$\left[\Delta = \frac{7^2}{4} + \frac{6^3}{27}\right] \rightarrow \left[\Delta = \frac{49}{4} + \frac{216}{27}\right] \rightarrow \left[\Delta = \frac{49}{4} + \frac{8}{1}\right] \rightarrow \left[\Delta = \frac{49}{4} + \frac{32}{4}\right] \rightarrow \left[\Delta = \frac{81}{4}\right]$$

Using the given data of  $\Delta = \frac{81}{4}$

$$x = \sqrt[3]{\sqrt{\frac{81}{4}} + \frac{7}{2}} - \sqrt[3]{\sqrt{\frac{81}{4}} - \frac{7}{2}}$$

$$x = \sqrt[3]{\frac{9}{2} + \frac{7}{2}} - \sqrt[3]{\frac{9}{2} - \frac{7}{2}}$$

$$x = \sqrt[3]{\frac{16}{2}} - \sqrt[3]{\frac{2}{2}}$$

$$x = \sqrt[3]{\frac{8}{1}} - \sqrt[3]{\frac{1}{1}}$$

$$x = \sqrt[3]{8} - \sqrt[3]{1}$$

$$x = (2) - (1)$$

$$x = 1$$