

Q.7) If  $a, b$  and  $c$  are in A.P. and one root of the equation  $ax^2 + bx + c = 0$  is  $2$ , then find the other root.

Solution: Let  $\alpha$  be the other root. Then,

$$4a + 2b + c = 0 \text{ and } 2b = a + c$$

$$\Rightarrow 5a + 2c = 0$$

$$\Rightarrow \frac{c}{a} = -\frac{5}{2}$$

Now,

$$2 \times \alpha = \frac{c}{a} = -\frac{5}{2}$$

$$\therefore \alpha = \boxed{-\frac{5}{4}}$$