

$$(\sqrt{3} + \sqrt{7})(\sqrt{3} - \sqrt{7})$$

Using the identity $(a + b)(a - b) = a^2 - b^2$,

$$(\sqrt{3} + \sqrt{7})(\sqrt{3} - \sqrt{7}) = (\sqrt{3})^2 - (\sqrt{7})^2$$

$$= 3 - 7$$

$$= -4$$

Q.12: Rationalise the denominator of $1/[7+3\sqrt{3}]$.

Solution:

$$1/(7 + 3\sqrt{3})$$

By rationalising the denominator,

$$= [1/(7 + 3\sqrt{3})] [(7 - 3\sqrt{3})/(7 - 3\sqrt{3})]$$

$$= (7 - 3\sqrt{3})/[(7)^2 - (3\sqrt{3})^2]$$

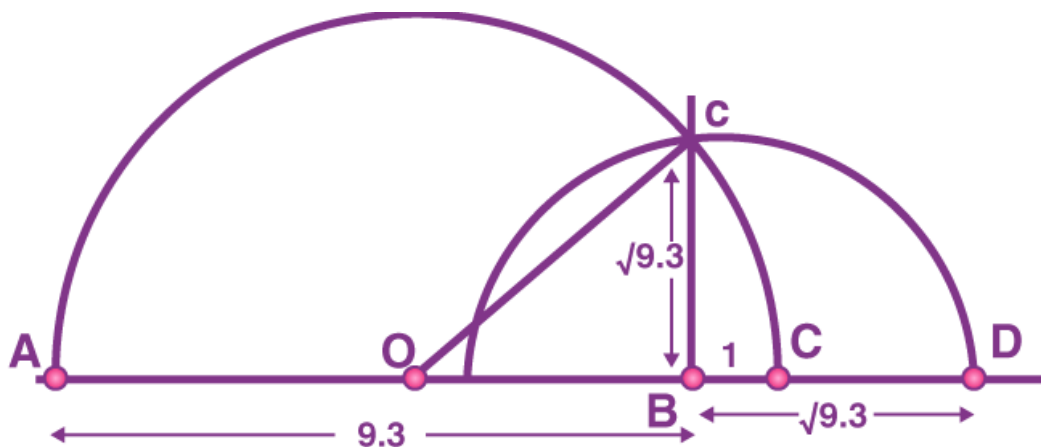
$$= (7 - 3\sqrt{3})/(49 - 27)$$

$$= (7 - 3\sqrt{3})/22$$

Q.13: Represent $\sqrt{9.3}$ on the number line.

Solution

Representation of $\sqrt{9.3}$ on the number line is given below:



Q.14: Simplify: