

Mathematics

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(Chapter – 1) (Number Systems)(Exemplar Problems)

(Class – IX)

Exercise 1.1

Write the correct answer in each of the following:

Question 13:

$\frac{1}{\sqrt{9}-\sqrt{8}}$ is equal to

(A) $\frac{1}{2}(3 - 2\sqrt{2})$

(B) $\frac{1}{3+2\sqrt{2}}$

(C) $3 - 2\sqrt{2}$

(D) $3 + 2\sqrt{2}$

 **Answer 13:**

(D) $3 + 2\sqrt{2}$

Solution:

We have $\frac{1}{\sqrt{9}-\sqrt{8}}$

$$\frac{1}{\sqrt{9}-\sqrt{8}} = \frac{1}{3-2\sqrt{2}} = \frac{1}{3-2\sqrt{2}} \times \frac{3+2\sqrt{2}}{3+2\sqrt{2}} = \frac{3+2\sqrt{2}}{9-8} = 3+2\sqrt{2}$$

