

# 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 21:

Which of the following is equal to  $x$ ?

(A)  $x^{\frac{12}{7}} - x^{\frac{5}{7}}$       (B)  $\sqrt[12]{(x^4)^{\frac{1}{3}}}$       (C)  $(\sqrt{x^3})^{\frac{2}{3}}$       (D)  $x^{\frac{12}{7}} \times x^{\frac{7}{12}}$

### Answer 21:

(C)  $(\sqrt{x^3})^{\frac{2}{3}}$

Solution:

$$\begin{aligned} & (\sqrt{x^3})^{\frac{2}{3}} \\ &= \left(x^{\frac{3}{2}}\right)^{\frac{2}{3}} \\ &= x^{\frac{3}{2} \times \frac{2}{3}} \\ &= x \end{aligned}$$

