

**Holiday Homework**  
**Class - 12 (2025-26)**  
**Subject - mathematics**

**Do these questions in your classwork notebook.**

1. Let  $A=\{1,2,3\}$ . write all one-one fro a itself.
2. Show that the function  $f:R\rightarrow R$  given by  $f(x) = x^3+x$  is a bijection.
3. Prove that every identity relation on a set is reflexive, but the converse is not necessarily true.
4. Find the set of values of  $\operatorname{cosec}^{-1}\left(\frac{\sqrt{3}}{2}\right)$ .
5. If  $\tan^{-1}(\cot\theta) = 2\theta$ , then find  $\theta$ .