**Class – 10**

**Mathematics Chapter – 1**

**Extra Questions**

1. **Use Euclid’s division lemma to show that the square of any positive integer is either of the form 3m or 3m + 1 for some integer m.**
2. **Express each number as a product of its prime factors:**  
   **(i) 140**  
   **(ii) 156**  
   **(iii) 3825**  
   **(iv) 5005**  
   **(v) 7429**
3. **Given that HCF (306, 657) = 9, find LCM (306, 657).**
4. **Prove that 3 + 2√5 is irrational.**
5. **Without actually performing the long division, state whether the following rational numbers will have a terminating decimal expansion or a non-terminating repeating decimal expansion:  
   (i) 13/3125 (ii) 17/8 (iii) 64/455 (iv) 15/1600**
6. **The following real numbers have decimal expansions as given below. In each case, decide whether they are rational or not. If they are rational, and of the form, p/q what can you say about the prime factors of q? (i) 43.123456789 (ii) 0.120120012000120000. . .**
7. **Check whether  can end with the digit 0 for any natural number n.**