Activity Worksheet

Challenging brain

Sub : Mathematics **Grade: X** **Date: .....**

Name: ..... **ID No.....**

Assignment

1. Prove that p is irrational.

Sol.

2. Prove that $3+2\sqrt{5}$ is irrational.

Sol.

3. The following real numbers have decimal expansions as given below. In each case, decide whether they are rational or not. If they are rational, of the form $\frac{p}{q}$ what can you say about the prime factors of q ?

(i) $43.\overline{123456789}$ (ii) 43.123456789 (iii) 0.120120012000120000...

Sol. (i)

(ii)

(iii)

4. Write down the decimal expansions of the following rational numbers:

$(i)\ \frac{23}{2^3.5^2}$ $(ii)\ \frac{35}{50}$

Sol.(i)

(ii)