Class - 10th
Maths

Que - Use Euclid's division algorithm to find the HCF of 210 and 55.

Solution :- Here, $210 > 55$.

Applying Euclid's division lemma,

$210 = 55 \times 3 + 45$ ... (i)

$$\begin{array}{r} 55 \overline{)\,210\,(3} \\ \underline{165} \\ 45 \end{array}$$

$55 = 45 \times 1 + 10$ ... (ii)

$$\begin{array}{r} 45 \overline{)\,55\,(1} \\ \underline{45} \\ 10 \end{array}$$

$45 = 10 \times 4 + 5$ ... (iii)

$$\begin{array}{r} 10 \overline{)\,45\,(4} \\ \underline{40} \\ \times 5 \end{array}$$

Consider the new divisor 10 and the new remainder 5, and apply division lemma to get

$10 = 5 \times 2 + 0$ ... (iv)

So, the divisor at this stage (5) is the HCF of 210 and 55.

H.W

Use Euclid's division algorithm to find the HCF of

(i) 135 and 225
(ii) 196 and 38220
(iii) 867 and 255
(iv) 184, 230 and 276
(v) 136, 170 and 255