Assignment - 1

Q-1

$i = n$

while $i > 2$

$\quad i = i^{1/25}$ $\Rightarrow$ $K = \log_{25}(\log_2 2)$

$\quad$ PRINT(i)

$$i = n$$
$$n^{1/25} \quad - \quad \textcircled{1}$$
$$n^{1/25^2}$$
$$|$$
$$| \quad K \text{ times}$$
$$n^{1/25^k} = 2 \quad \{ \log_2 2 = 1]$$

Q-2

$i = 29$

while $i < n$:

$\quad i = j^{23}$ $\quad K = \log_{23}(\log_{29} n)$

$$(29)^{23^1}$$
$$(29)^{23^2}$$
$$|$$
$$(29)^{23^k} = n$$

$$\log_n (29)^{23^k} = 1$$

$$\therefore \log_n(29) = \frac{1}{23^k}$$

$$\therefore K = \log_{23}(\log_{29} n)$$

Q-3

$i = 1$

while $i < n$:

$\quad i = 2*i;$ $\quad K = \log_6 n$

$\quad i = 3*i;$

$n = 40$

$i = 6*1$

$i = 6*6$

$i = 6*36$