Problems

1) Range minimum/maximum, Point update

$$\min(m_1, m_2)$$
$$a[L \cdots R]$$

$$a[L \cdots M] \quad m_1$$
$$a[M+1 \cdots R] \quad m_2$$
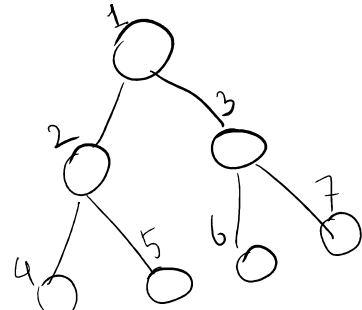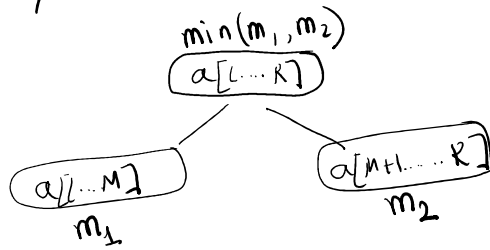
$$\text{tree}[nd] = \text{tree}[nd+nd] + \text{tree}[nd+nd+1] \rightarrow x$$

$$L \rightarrow 2x \qquad R \rightarrow 2x+1$$
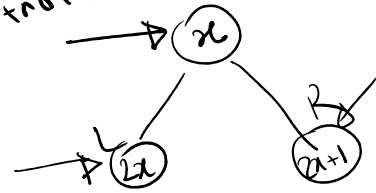
2) Range $\frac{LCM}{GCD}$ / Point update

5

| 5 | 10 | 5 | | 5 | 25 | | 0 |

5   5

a_1	a_2	a_3	a_4	a_5
2	3	5	7	11
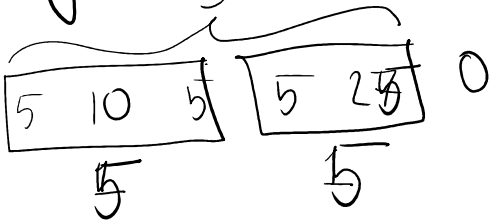
void build (- - - - -)
{
   :
   tree[nd] = gcd(left, right);
}
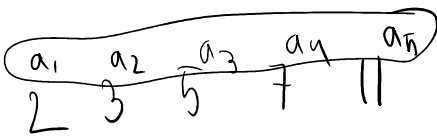
$$2 \cdot 3 \cdot 5 \cdot 7 \cdot 11$$

int gcd(int a, int b){
   if (b == 0) return a;
   return gcd(b, a % b);

$$2^3 \cdot 3^0 \cdot 5^{11} \cdot 7^0 \cdot 11^2$$

3, 0, 11, 0, 2

LCM

| ③ | ② | ③ | ③ | ③ |

$$= 2 \cdot 3 \cdot 5 \cdot 7 \cdot 11$$

| $2 \cdot 5 \cdot 7$ (3 2 3) | | $2 \cdot 3 \cdot 5 \cdot 11$ (1 2 3 3) |

3, 0, 2, 3, 0
Left

1, 2, 3, 0, 3
Right

3, 0, 4, 0, 0   0, 0, 7, 0, 2

$$2^3 \cdot 5^4 \quad \times \quad 5^7 \cdot 11^2$$