

FACTORS

- Total number of factors

$$180 = 2^2 \times 3^2 \times 5^1$$

$$= (2+1)(2+1)(1+1)$$

$$= 3 \times 3 \times 2$$

$$= 18$$

$$\begin{array}{r} 2 \overline{)180} \\ 2 \overline{)90} \\ 5 \overline{)45} \\ 3 \overline{)9} \\ 3 \overline{)3} \\ 1 \end{array}$$

- Even number of factors.

$$180 = 2^2 \times 3^2 \times 5^1$$

$$= 2 \times (2+1)(1+1)$$

$$= 2 \times 3 \times 2$$

$$= 12$$

$$360 = 2^3 \times 3^2 \times 5^1$$

- Odd number of factors

$$180 = 2^2 \times 3^2 \times 5^1$$

$$= 1 \times (2+1)(1+1)$$

$$= 1 \times 3 \times 2 = 6$$