

$y = \text{torch.cumsum}(x, \text{dim}, \text{out=None}, \text{dtype=None})$

Require : $|x| = (d_1, \dots, d_l)$

$$0 \leq \text{dim} < l$$

Guarantee : $|y| = (d_1, \dots, d_l)$

$$\sigma \vdash E \Rightarrow e, c$$

$$k = \text{rank}(e)$$

$$c' = \{k \geq 0 \wedge (0 \leq p < k)\}$$

$$\sigma \vdash \text{cumsum}(E, p) \Rightarrow e, c \vee c'$$

Description: cumulatively adds elements dim -dimensionwise
when $\text{dim} = -1$, last dimension is chosen.