

Scalar Output

torch.numel

torch.numel(input)	
	Require
	<ul style="list-style-type: none">$\text{input} = (d_1, d_2, \dots, d_k)$
	Guarantees
	<ul style="list-style-type: none">$d_1 \cdot d_2 \cdots d_k$를 스칼라로 반환

$$\frac{\sigma \vdash E \Rightarrow e, c}{\sigma \vdash \text{numel}(E) \Rightarrow e[1]e[2] \cdots e[k], c}$$

torch.Tensor.dim, torch.Tensor.ndim, torch.Tensor.ndimension

a.dim(), a.ndim or a.ndimension()	
	Require
	<ul style="list-style-type: none">$a = (d_1, d_2, \dots, d_k)$
	Guarantees
	<ul style="list-style-type: none">k를 스칼라로 반환

$$\frac{\sigma \vdash E \Rightarrow e, c}{\sigma \vdash E.\text{dim}() \Rightarrow \text{rank}(e), c}$$

$$\frac{\sigma \vdash E.\text{dim}() \Rightarrow k, c}{\sigma \vdash E.\text{ndim} \Rightarrow k, c} \qquad \text{alias}$$

$$\frac{\sigma \vdash E.\text{dim}() \Rightarrow k, c}{\sigma \vdash E.\text{ndimension}() \Rightarrow k, c} \qquad \text{alias}$$

Conversion To/From NonTensor

torch.Tensor.tolist

- 파이썬 리스트로 텐서를 바꿔주는 함수

torch.as_tensor(numpy_list), torch.from_numpy

- 넘파이 배열이나 파이썬 리스트로부터 텐서를 만드는 함수