

# tensor.log

...

```
Copy fnlog(self:@Tensor)->Tensor;
```

...

Computes the natural log of all elements of the input tensor.

$y_i = \log(x_i)$

## Args

- self
- (@Tensor
- ) - The input tensor.
- 

## Returns

Returns a new tensor in T with the natural log of the elements of the input tensor.

## Type Constraints

Constrain input and output types to fixed point tensors.

## Examples

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```
Copy usecore::array::{ArrayTrait,SpanTrait};
```

```
useorion::operators::tensor::{TensorTrait,Tensor,FP8x23Tensor}; useorion::numbers::{FP8x23,FixedTrait};
```

```
fnlog_example()->Tensor { lettensor=TensorTrait::new( shape:array![2,2].span(), data:array![  
FixedTrait::new_unscaled(0,false), FixedTrait::new_unscaled(1,false), FixedTrait::new_unscaled(2,false),  
FixedTrait::new_unscaled(100,false), ] );
```

```
// We can call log function as follows. returntensor.log(); }
```

```
[[0,5814538,9215825,38630966]] // The fixed point representation of [[0, 0.693147,  
1.098612, 4.605170]]
```

...

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