

T_{AB} \int K^3 K^3 K^3

$T(x) = 4x$ $T: \mathbb{R}^1 \rightarrow \mathbb{R}^1$ K^3

$T: \mathbb{R}^1 \rightarrow \mathbb{R}^1$ K^3

$S: \mathbb{R}^4 \rightarrow \mathbb{R}^1$ K^3

$$S \begin{pmatrix} x_1 \\ x_2 \\ x_3 \\ x_4 \end{pmatrix} = 2x_1 + 3x_2 - x_3 - x_4$$

\mathbb{R}^1 \mathbb{R}^4 K^3

T_{AB} K^3

A K^3 K^3 K^3

$$A = \begin{pmatrix} 3 & 1 & 0 \\ 0 & 4 & 0 \\ 5 & 5 & 5 \end{pmatrix}$$

A K^3 K^3 K^3

\mathbb{R}^3 \mathbb{R}^3 \mathbb{R}^3

\mathbb{R}^3 \mathbb{R}^3 \mathbb{R}^3

A K^3 K^3

D K^3 K^3 K^3

