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"import torch\n",

"\n",

"a = torch.tensor([1, 1, 1], dtype=torch.float32).view(-1, 1)\n",

"b = torch.tensor([1, 1, 1], dtype=torch.float32).view(-1, 1)\n",

"X = torch.zeros((3, 3), requires\_grad=True)\n",

"f = a.t() @ torch.exp(X) @ b\n",

"f.backward()\n",

"gradient\_matrix = X.grad\n",

"print(gradient\_matrix)"

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