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6. Kernel Composition Rules

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Exercises due Mar 8, 2023 08:59 -03 Completed

Kernel Composition Rules**Video**
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Kernel Composition Rules 1

1/1 point (graded)

Recall from the video above that if $f : \mathbb{R}^d \rightarrow \mathbb{R}$ and $K(x, x')$ is a kernel, so is

$$\widetilde{K}(x, x') = f(x) K(x, x') f(x').$$

If there exists $\phi(x)$ such that

$$K(x, x') = \phi(x) \cdot \phi(x'),$$

then which of the following φ gives

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You have used 2 of 2 attempts

Kernel Composition Rules 2

1/1 point (graded)

Let \mathbf{x} and \mathbf{y} be two vectors of the same dimension. Use the the definition of kernels and composition rules from the video above to decide which of the following are kernels. (Note: \mathbf{x} and \mathbf{y} are feature vectors that are not polynomial.) (Choose all those apply.)

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