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## DOT PRODUCT OF VECTORS

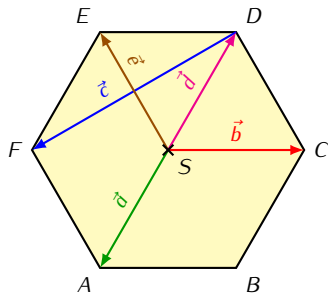
### MATCHING GAME

The goal of the puzzle is to make correct pairs of questions and answers with a minimal amount of incorrect attempts.



## David Hilbert, German mathematician

We are given a regular hexagon  $ABCDEF$  with the center  $S$  and with side length of 1. In the hexagon, the vectors  $\vec{a}$ ,  $\vec{b}$ ,  $\vec{c}$ ,  $\vec{d}$  and  $\vec{e}$  are highlighted (see the picture). Calculate the dot products of the given pairs of vectors and match each product with its correct value.



Dot products:

- |   |   |   |   |
|---|---|---|---|
| 1 | 3 | 5 | 7 |
| 2 | 4 | 6 | 8 |

Results:

- |   |   |   |   |
|---|---|---|---|
| A | C | E | G |
| B | D | F | H |

