Nearest neighbour worked example

Instances are: 2 classified reviews – topic is film or books; plus a new (unclassified) review - topic unknown.

Attributes are the word counts for 3 different words.

	Word 1	Word 2	Word 3	Class
Review 1	10	25	10	films
Review 2	10	10	35	books
New review	5	8	12	?

Compute the sum-squared distance between each instance *a* and the new instance *b* with attributes from 1 to *F*

$$\sum_{i=1}^{F-1}(v(a,i)-v(b,i))^2$$

and pick the smallest.

Subtract values for the unknown review

	Word 1	Word 2	Word 3	Class
Review 1				films
Review 2				books

Square the result

	Word 1	Word 2	Word 3	Class
Review 1				films
Review 2				books

Sum

	films
	books

The class of the new review is **:**