For example, if we had 6 5x5 filters, we'll get 6 separate activation maps:

activation maps

32

32

3

Convolution Layer

28

28

6
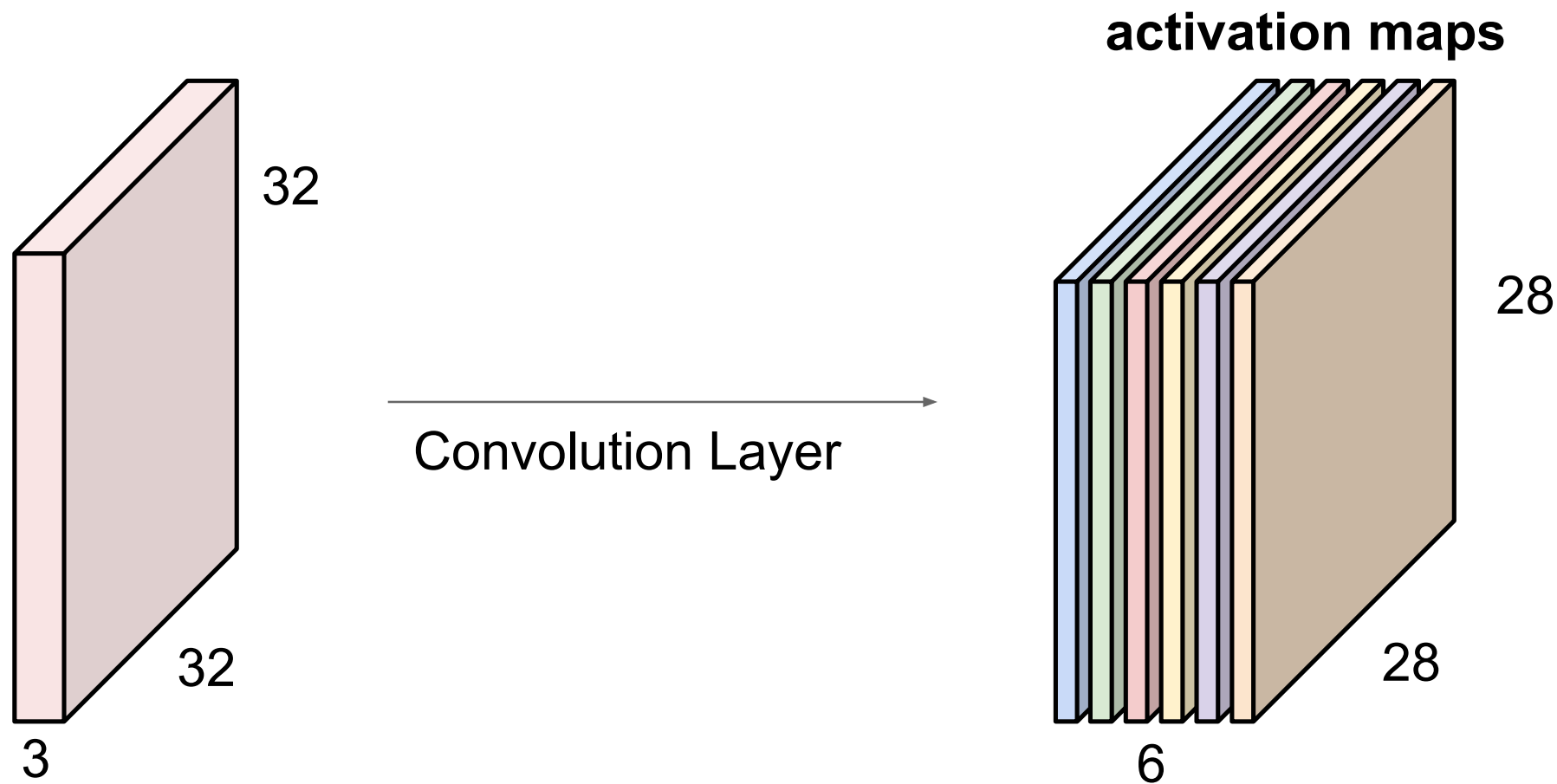
We stack these up to get a "new image" of size 28x28x6!