

SECTION 3.4.2 AND 3.4.3: COMPOSITION OF LINEAR MAPS AND MATRIX MULTIPLICATION
(DAY 2)

1. **Take-aways from Monday** Let $f : V \rightarrow W$ and $g : W \rightarrow Y$ be linear maps with matrix representations A and B respectively. Then,

- the matrix representation of $(g \circ f)$: _____ is _____ with dimension _____
- the function $(g \circ f)$ is a
- Function composition - matrix multiplication _____ commutative.
- Function composition - matrix multiplication _____ associative.

- Function composition - matrix multiplication _____ distributive.

2. Terminology

(a) main diagonal

(b) identity matrix

(c) diagonal matrix

(d) permutation matrix

(e) elementary (reduction) matrices