

## October 23

### Announcements

- Worksheet 4 posted, due Friday
- Webassign 3.3 due Thursday
- Grade approximations posted
- Watch 3blue1brown 4,5,6

### Section 3.2

#### Diagonal matrices are a thing

Multiplication is awesome! Won't it be great if every matrix was diagonal.

#### Elementary matrices are a thing

Elementary matrices are the matrices that correspond to elementary row operations. Figure them out with class. It'll be fun.

#### Block multiplication

They are a thing. You feel great when you get it to work.

#### Matrix multiplication

We can think of  $AB$  as  $B$  acting on  $A$  or as  $A$  acting on  $B$ . We can demonstrate this with diagonal matrices. here it is.

### Section 3.3

What does invertible mean?

When is a linear transform  $T$  invertible?

What are some obvious transform that are not invertible?

What are some obvious transform that are invertible?

What are some obvious inverses we can figure out?

How can we compute this inverse?