

We can find the inverse of a matrix using the `inv` function. The function returns an error if the matrix is not invertible.

```
>> A = [4 2 3; 1 0 -1; 2 1 1];  
>> inv(A) % returns the inverse matrix of A
```

Alternatively, we can set up an augmented and row reduce it.

```
>> A = [4 2 3; 1 0 -1; 2 1 1];  
>> I = eye(3)  
>> M = [A I]  
>> rref(M)
```

Invertibility gives us a 3rd method for solving systems.

```
>> A = [4 2 3; 1 0 -1; 2 1 1];  
>> b = [3; 2; 1]  
>> x = inv(A)*b % the solution to Ax=b
```