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Cramer's Rule

```
A = [1,5;-2,-7];b=[7;5];
B1=A; B2=A; B1(:,1)=b; B2(:,2)=b;
x1=det(B1)/det(A), x2 = det(B2)/det(A)
xsol = cramers(A,b)

x1 =
    -24.6667
x2 =
     6.3333
xsol =
    -24.6667     6.3333
```

Naïve Gauss Elimination

```
aug = [A,b]
factor = aug(2,1) / aug(1,1);
aug(2,:) = aug(2,:) - factor * aug(1,:)
factor = aug(1,2) / aug(2,2);
aug(1,:) = aug(1,:) - factor * aug(2,:)
aug(2,:) = aug(2,:) / aug(2,2)
xsol2 = aug(:,3)

aug =
     1     5     7
    -2    -7     5
aug =
     1     5     7
     0     3    19
aug =
     1.0000     0 -24.6667
           0     3.0000    19.0000
aug =
     1.0000     0 -24.6667
           0     1.0000     6.3333
xsol2 =
    -24.6667
     6.3333
```

Gauss Elimination using function

```
xsol3 = GaussNaive(A,b)

xsol3 =
    -24.6667
     6.3333
```

Timing

```
A4 = [4,2,3,-1;2,-1,2,1;1,3,-1,3;-1,2,1,1];
b4 = [19;5;-1;7];
tic
cramers(A4,b4)
toc
tic
GaussNaive(A4,b4)
toc

ans =
    0.2479    2.2645    4.0496   -1.3306
Elapsed time is 0.000401 seconds.
ans =
    0.2479
    2.2645
    4.0496
   -1.3306
Elapsed time is 0.000326 seconds.
```

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