Bryan Guner 12/2/15

**Section 8.1**

**#15**

a=[4 5;-6 9];

b=[-2 6;8 -10];

a+b

b-a

2\*a+3\*b

BryanGuner\_matlab8

ans =

2 11

2 -1

ans =

-6 1

14 -19

ans =

2 28

12 -12

**#23**

a=[3 4;8 1];

b=[5 10;-2 -5];

c=(a\*b).'

d=(a.')\*(b.')

>> BryanGuner\_matlab8

c =

7 38

10 75

d =

95 -46

30 -13

**Section 8.2:**

**#11**

syms x y z

a=[2 2 0;-2 1 1;3 0 1];

b=[x; y; z];

c=linsolve(a,b)

>> BryanGuner\_matlab8

c =

x/12 - y/6 + z/6

(5\*x)/12 + y/6 - z/6

y/2 - x/4 + z/2

**#15**

syms x y z

a=[1 1 1;1 -1 -1;3 1 1];

b=[x;y;z];

c=linsolve(a,b)

>> BryanGuner\_matlab8

Warning: The system is inconsistent. Solution does not exist.

> In symengine

In sym/privBinaryOp (line 908)

In sym/linsolve (line 63)

In BryanGuner\_matlab8 (line 4)

c =

Inf

Inf

Inf

**#17**

a=[3 0 2;2 7 1;2 6 4];

d=det(a)

>> BryanGuner\_matlab8

d =

62

**Section 8.5:**

**#15;**

a=[6 1 8 10;0 2/3 7 2;0 0 -4 9;0 0 0 -5];

d=det(a)

>> BryanGuner\_matlab8

d =

80

**#19:**

a=[1 2 1;4 1 -1; 1 2 -1];

d=det(a)

>> BryanGuner\_matlab8

d =

14

**#17.)**

a=[2 4];

b=[-1 4];

3\*a

a+b

a-b

norm(a+b)

norm(a-b)

BryanGuner\_matlab8

ans =

6 12

ans =

1 8

ans =

3 0

ans =

8.0623

ans =

3

**#21.)**

a=[-3 2];

b=[0 7];

3\*a

a+b

a-b

norm(a+b)

norm(a-b)

BryanGuner\_matlab8

ans =

-9 6

ans =

-3 9

ans =

-3 -5

ans =

9.4868

ans =

5.8310

>>

**#23.)**

a=[1 -3];

b=[-1 1];

4\*a-2\*b

-3\*a-5\*b

BryanGuner\_matlab8

ans =

6 -14

ans =

2 4

>>

**Section 8.6:**

**#25.)**

a=[1 -3 2];

b=[-1 1 1];

c=[2 6 9];

a+(b+c)

b+2\*(a-3\*c)

BryanGuner\_matlab8

ans =

2 4 12

ans =

-11 -41 -49

**#33**

a=[1 -3 2];

b=[-1 1 1];

c=[2 6 9];

norm((a/norm(a)))+5\*norm((b/norm(b)))

>> BryanGuner\_matlab8

ans =

6

**Section 8.10**

**#15.)**

a=[2 -3 4];

b=[-1 2 5];

c=[3 6 -1];

dot(a,c)

d=a+b+c;

dot(a,d)

e=dot(a,b);

f=dot(b,b);

g=e/f;

dot(g,b)

>> BryanGuner\_matlab8

ans =

-16

ans =

25

Error using dot (line 33)

A and B must be same size.

Error in BryanGuner\_matlab8 (line 10)

dot(g,b)

**8.10**

**#3.)**

a=[1 -3 1];

b=[2 0 4];

cross(a,b)

>> BryanGuner\_matlab8

ans =

-12 -2 6

**#5.)**

a=[2 -1 2];

b=[-1 3 -1];

cross(a,b)

BryanGuner\_matlab8

ans =

-5 0 5

**#21)**

a=[.5 0 .5];

b=[4 6 0];

cross(a,b)

>> BryanGuner\_matlab8

ans =

-3 2 3

>>

p1=[0 1 0];

p2=[0 0 1];

c=cross(p1,p2);

A=0.5\*norm(c)

BryanGuner\_matlab8

A =

0.5000