NAME:

Time: 5 Minutes
NOTES:
a. **Credit is only given to the correct numerical values.**
b. **All numerical values must be calculated with three digits of accuracy after the decimal point.**
c. **Do not write on the back side of the papers.**

1. The viewing parameters for a perspective projection are given as
   VRP(WC)=(0,0,0)   VPN(WC)=(0, 0,1)
   VUP(WC)=(0,1,0)   PRP (VRC)=(4,7,10)
   u_{min} (VRC) = 6 u_{max} (VRC) = 11
   v_{min} (VRC) = -3 v_{max} (VRC) = 5
   n_{min} (VRC) = 12 n_{max} (VRC) = 20

   Given all other transformations, find the **shear** matrix which will transform this viewing volume into a standard perspective view volume which is bounded by the planes: x=z ; x=-z ; y=z ; y=-z ; z=1

Matrix #2: Rx

1	0	0	0
0	1	0	0
0	0	1	0
0	0	0	1

Matrix #1: Translate

1	0	0	0
0	1	0	0
0	0	1	0
0	0	0	1

Matrix #4: Rz

1	0	0	0
0	1	0	0
0	0	1	0
0	0	0	1

Matrix #3: Ry

1	0	0	0
0	1	0	0
0	0	1	0
0	0	0	1

Matrix #6: Shear

1	0	0.45	0
0	1	-0.6	0
0	0	1	0
0	0	0	1

Matrix #5: Translate

1	0	0	-4
0	1	0	-7
0	0	1	-10
0	0	0	1

Matrix #8: Scale

0.1	0	0	0
0	0.1	0	0
0	0	0.1	0
0	0	0	1

Matrix #7: Scale

4.0	0	0	0
0	2.5	0	0
0	0	1	0
0	0	0	1