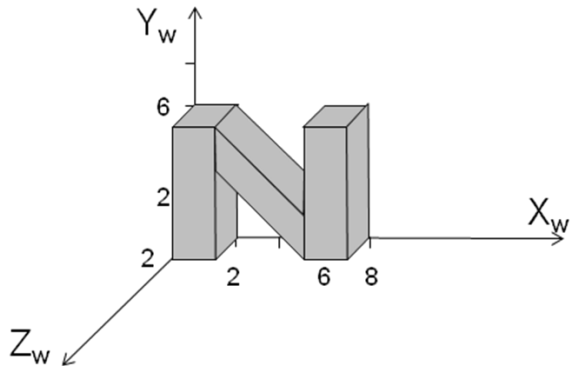
Graphics 2

CLASS EXERCISE: VIRTUAL CAMERA

February 2012

The figure below shows a sketch of an object:



Calculate perspective projection of the above object given its vertex table and the following viewing parameters:

- viewpoint at VRP = (12, 36, 22)
- direction of viewing: towards the point (2, 6, 2)
- viewing distance D = 10

	Vertex table			
V1	0	0	2	1
V2	2	0	2	1
V3	2	0	0	1
V4	0	0	0	1
V5	0	6	2	1
V6	2	6	2	1
V7	2	6	0	1
V8	0	6	0	1
V9	6	0	2	1
V10	8	0	2	1
V11	8	0	0	1
V12	6	0	0	1
V13	6	6	2	1
V14	8	6	2	1
V15	8	6	0	1
V16	6	6	0	1

Face table (given is vertex number)			
1	2	3	4
5	8	7	6
1	5	6	2
2	6	7	3
3	7	8	4
4	8	5	1
9	10	11	12
13	16	15	14
9	13	14	10
10	14	15	11
11	15	16	12
12	16	13	9
6	7	11	10
5	6	10	9
8	5	9	12
7	11	12	8
1	2	3	4
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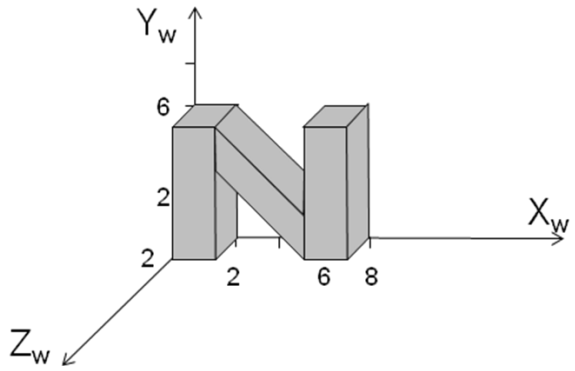

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