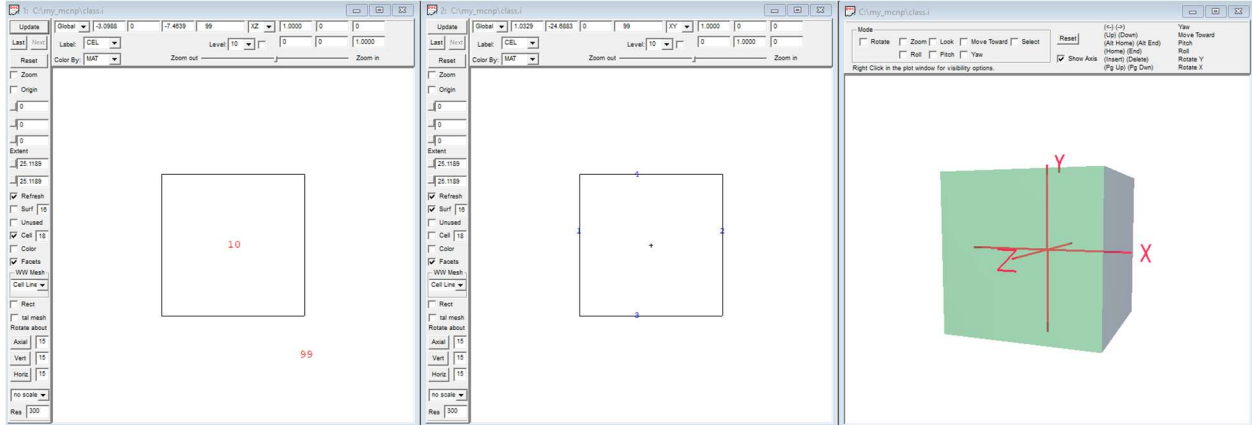


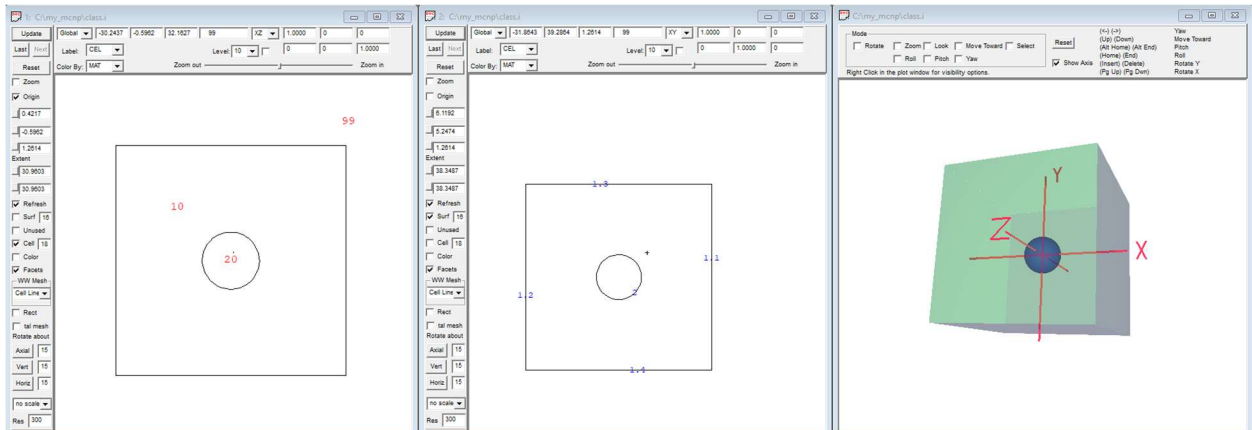
## Assignment 2

Use the MCNP manual to write the following surface and cell inputs:

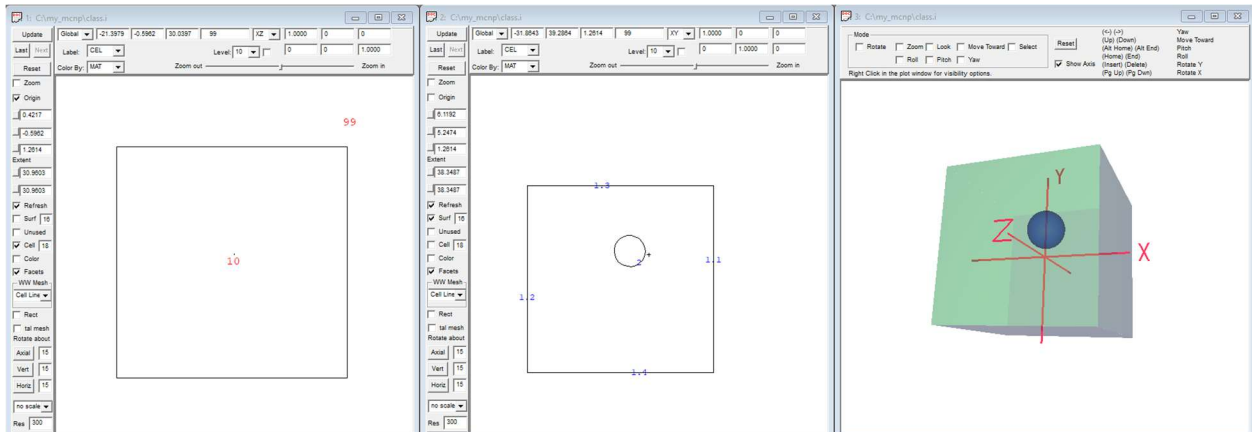
1.



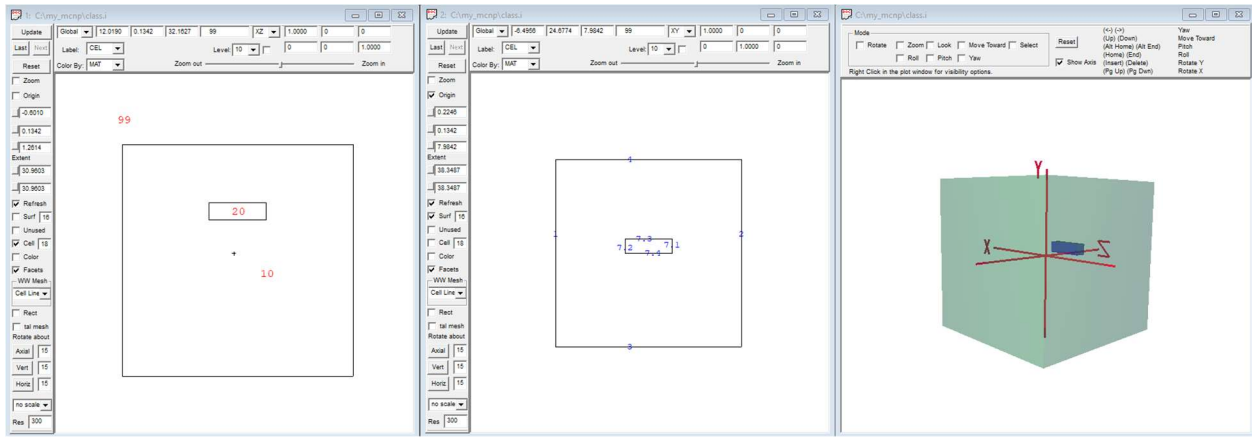
2.



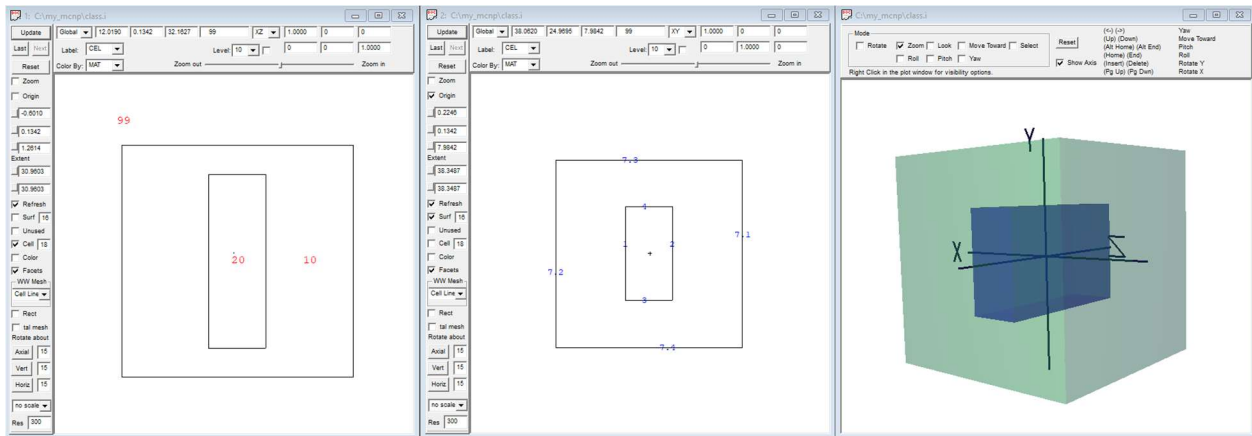
3.



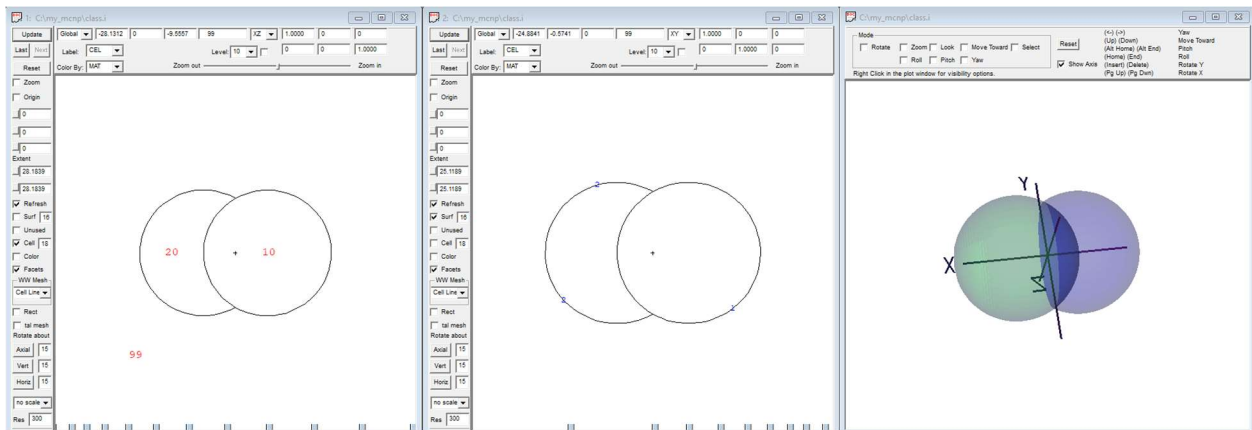
4.



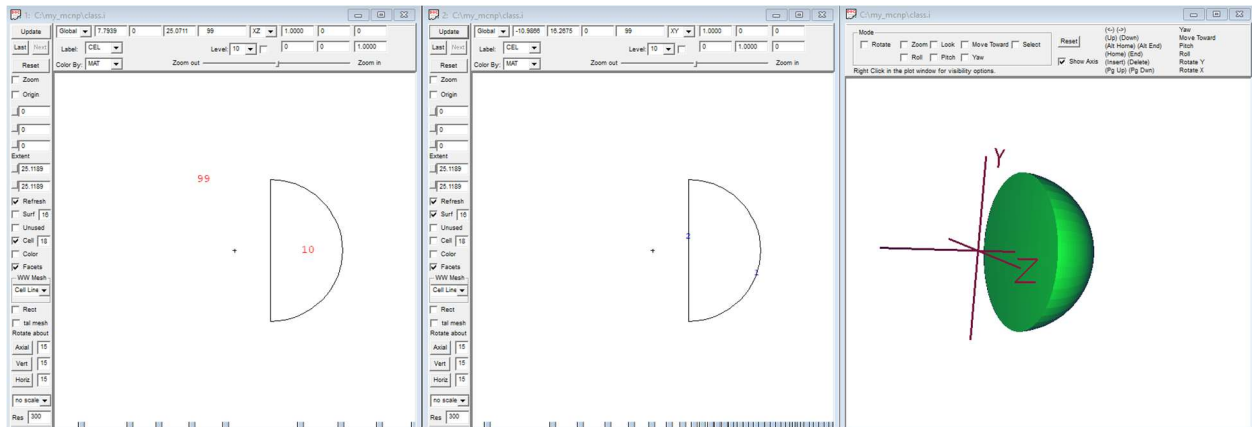
5.



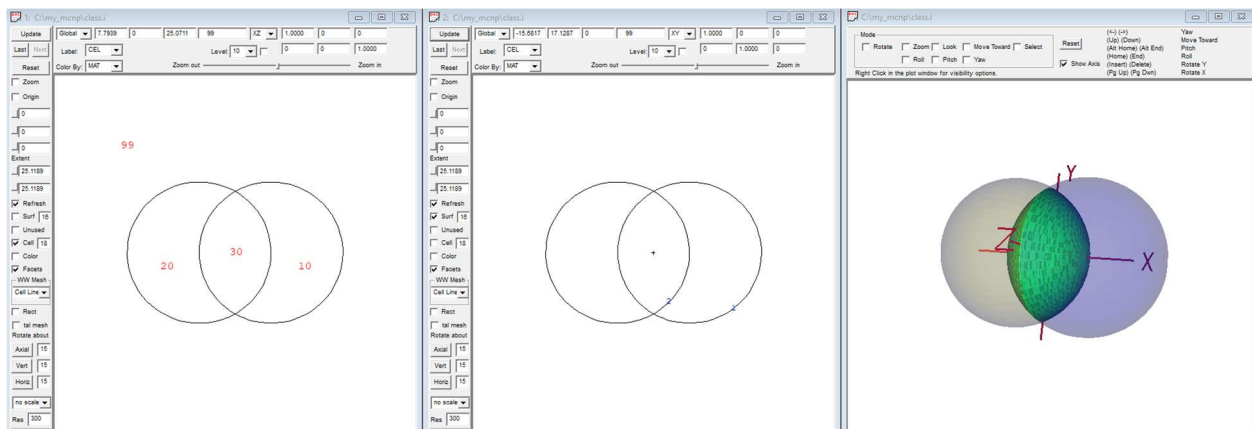
6.



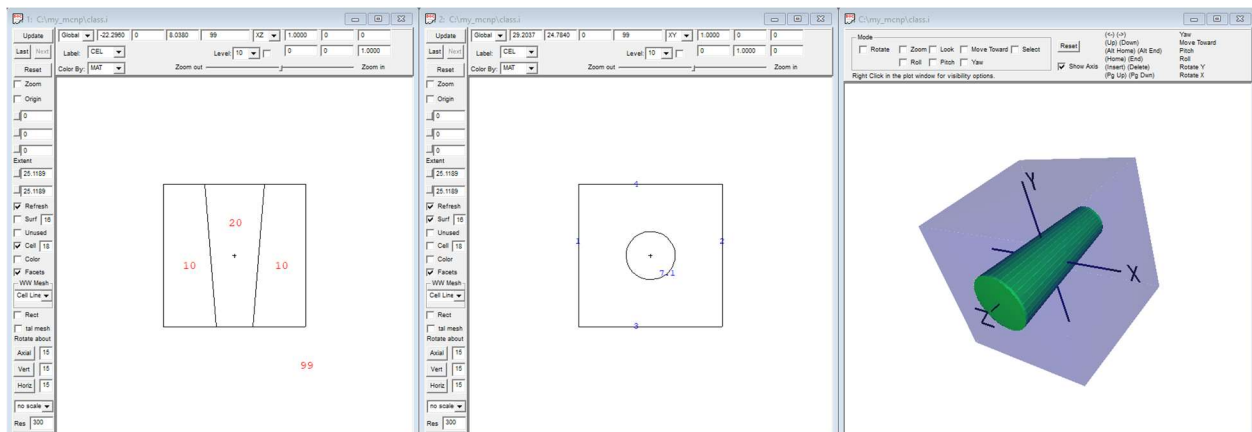
7.



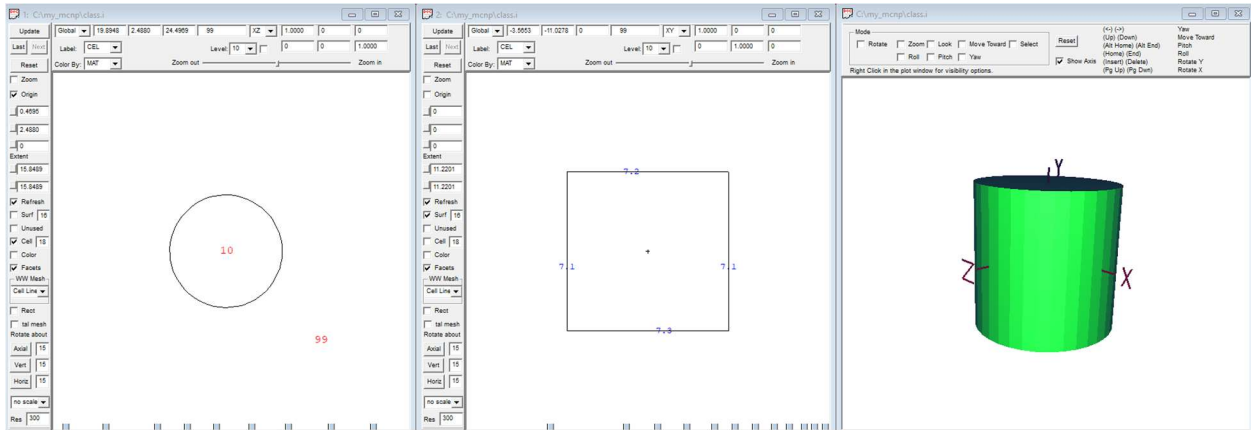
8.



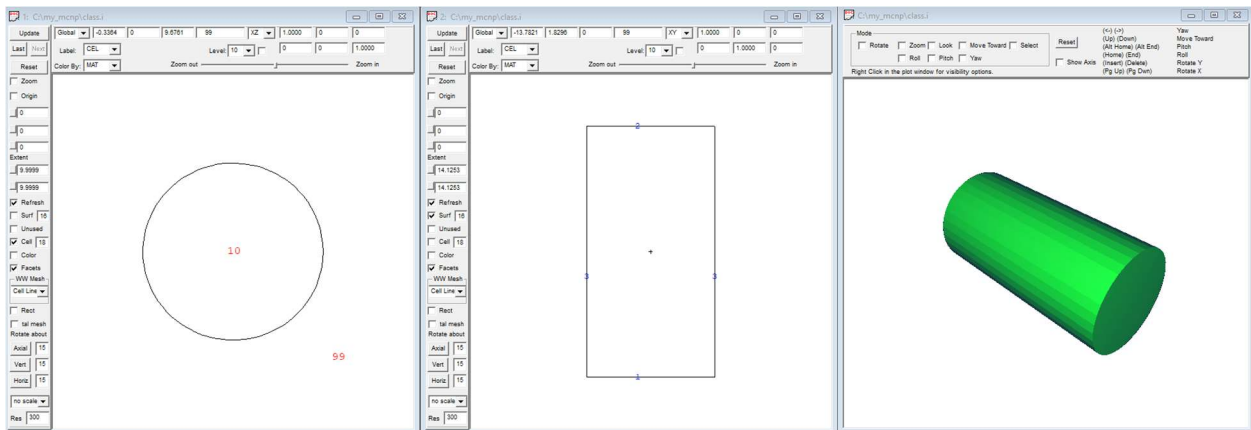
9.



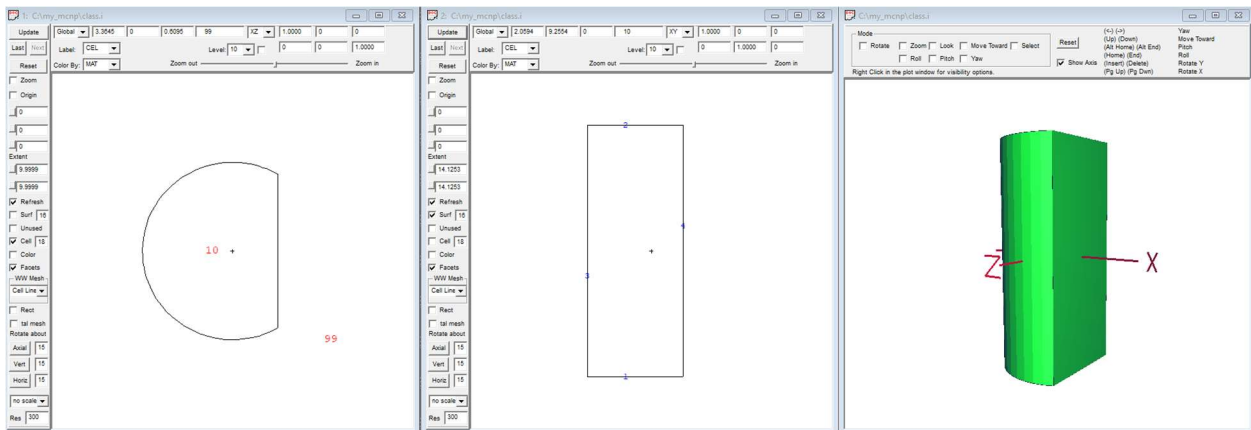
10.



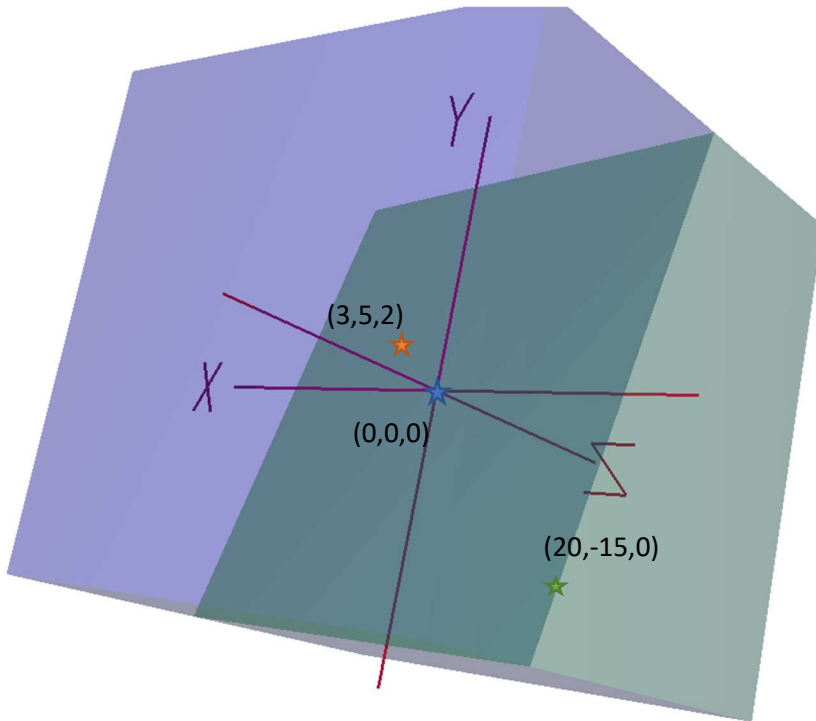
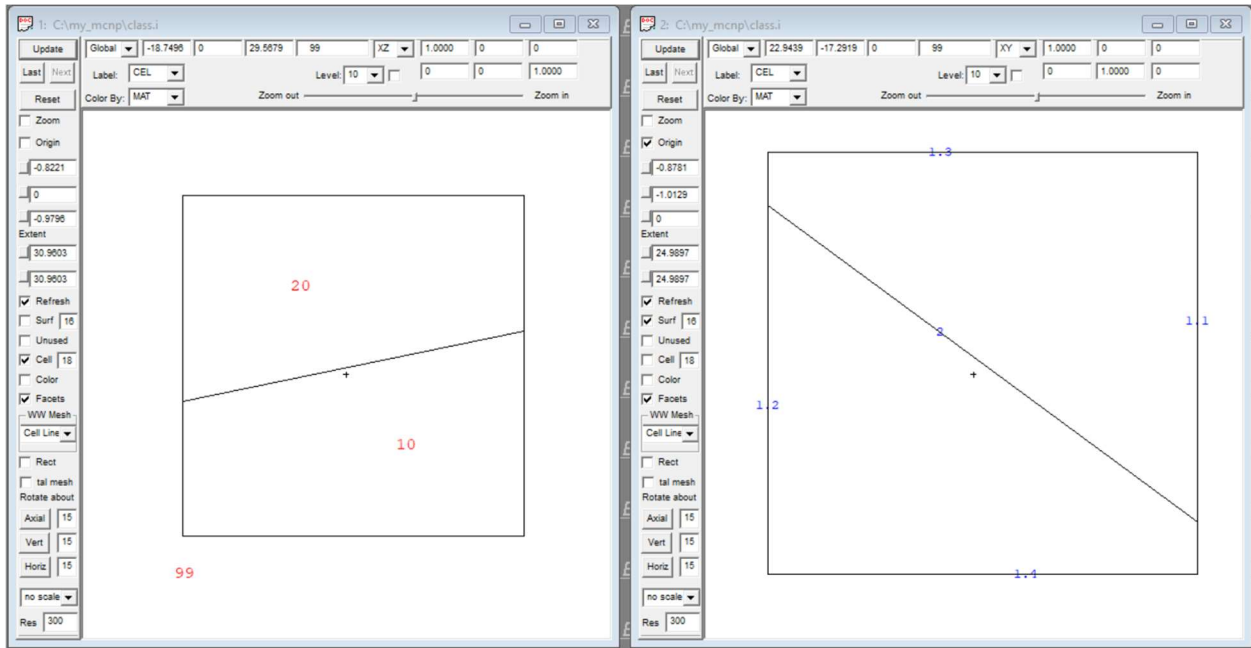
11.



12.



13.



## Answers

1.

### C Cells

```
99 0 -1:2:-3:4:-5:6 imp:p=0
```

```
10 0 1 -2 3 -4 5 -6 imp:p=1
```

---

### C Surfaces

```
1 px -10
```

```
2 px 10
```

```
3 py -10
```

```
4 py 10
```

```
5 pz -10
```

```
6 pz 10
```

2.

### C Cells

```
99 0 1 imp:p=0
```

```
10 0 -1 2 imp:p=1
```

```
20 0 -2 imp:p=1
```

---

### C Surfaces

```
1 rpp -10 10 -10 10 -10 10
```

```
2 so 2
```

3.

### C Cells

```
99 0 1 imp:p=0
```

```
10 0 -1 2 imp:p=1
```

```
20 0 -2 imp:p=1
```

---

### C Surfaces

```
1 rpp -10 10 -10 10 -10 10
```

```
2 s 1 2 0 2
```

---

4.

Class

C Cells

99 0 -1:2:-3:4:-5:6 imp:p=0

10 0 1 -2 3 -4 5 -6 7 imp:p=1

20 0 -7 imp:p=1

---

C Surfaces

1 px -20

2 px 20

3 py -20

4 py 20

5 pz -20

6 pz 20

7 rpp -5 5 0 5 5 10

5.

C Cells

99 0 7 imp:p=0

10 0 (-1:2:-3:4:-5:6) -7 imp:p=1

20 0 1 -2 3 -4 5 -6 imp:p=1

C Surfaces

1 px -5

2 px 5

3 py -10

4 py 10

5 pz -10

6 pz 10

7 rpp -20 20 -20 20 -20 20

6.

Class

C Cells

99 0 1 2 imp:p=0

10 0 -2 1 imp:p=1

20 0 -1 imp:p=1

C Surfaces

1 s 5 0 0 10

2 s -5 0 0 10

7.

C Cells

---

99	0	1:-2	imp:p=0
10	0	-1 2	imp:p=1

---

C Surfaces

1	so	10
2	px	2.5

8.

C Cells

99	0	1 2	imp:p=0
10	0	-1 2	imp:p=1
20	0	-2 1	imp:p=1
30	0	-1 -2	imp:p=1

C Surfaces

1	s	5 0 0 10
2	s	-5 0 0 10

9.

Class

C Cells

99	0	-1:2:-3:4:-5:6	imp:p=0
10	0	1 -2 3 -4 5 -6 7	imp:p=1
20	0	-7 5 -6	imp:p=1

C Surfaces

1	px	-20
2	px	20
3	py	-20
4	py	20
5	pz	-20
6	pz	20
7	trc	0 0 -30 0 0 60 5 7

---



10.

C Cells

99 0 7 imp:p=0

10 0 -7 imp:p=1

C Surfaces

7 rcc 0 -5 0 0 15 0 5

11.

C Cells

99 0 -1:2:3 imp:p=0

10 0 1 -2 -3 imp:p=1

C Surfaces

1 py -10

2 py 10

3 cy 5

12.

Class

C Cells

99 0 3:2:-1:4 imp:p=0

10 0 -3 -2 1 -4 imp:p=1

C Surfaces

1 py -10

2 py 10

3 cy 5

4 px 2.5

13.

C Cells

99 0 1 imp:p=0

10 0 -1 -4 imp:p=1

20 0 -1 4 imp:p=1

C Surfaces

1 rpp -20 20 -20 20 -20 20

4 p 6 8 -20 0

For calculators of planes, I used this website:

<https://planetcalc.com/8243/>