



Solutions #5

Dear CVG 2171 students,

Below are the solutions to the last assignment. You may contact your TA if anymore explanation is needed.

1-

Offset Point	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>
Stationing	0.000	20.000	78.940	148.963	163.654	203.691	250.454
Offset	2.15	3.51	4.04	6.57	5.87	4.64	1.65

1099 m² or 0.1099 ha:

Computations

0	20	78.94	148.963	163.65	203.69	250.454
2.15	3.51	4.04	6.57	5.87	4.64	1.65
56.6	222.5	371.472	91.378	210.39	147.07	

2-

349,610 ft² or 8.0260 ac

X	Y	XY (+)	YX (-)
1000.00	1000.00		1645490
1645.49	1114.85	1114850	1868433
1675.95	1696.05	2790833.315	1999626
1178.99	1664.04	2788847.838	1934646
1162.62	1337.78	1577229.242	1333138
996.53	1305.30	1517567.886	1305300
1000.00	1000.00	996530	
		10785858.28	10086633
		349613	8.026002588

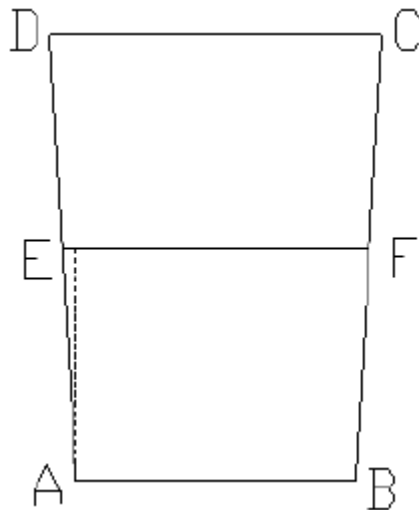


3-

1 ha or 10,000 m²

Dep	Lat	DMD	D-Area
30	40	30	1200
70	10	130	1300
30	-50	230	-11500
-60	-40	200	-8000
-90	-30	50	-1500
20	70	-20	-1400
			-19900
			9950

4-



$$\underline{AE = BF = 182.58 \text{ ft}}$$

$$\text{Area} = 84,000 \text{ ft}^2; \quad 1/2 \text{ area} = 42,000 \text{ ft}^2$$

$$\angle @A = \tan^{-1}(20/350) = 3^\circ 16' 14''$$

$$42000 = h/2[220.00 + (220.00 + 2h \tan 3^\circ 16' 14'')]]$$

$$\text{quadratic equation: } 0.057142857h^2 + 220h - 42000 = 0$$

$$h = 182.28 \text{ ft}$$

$$EF = 220 + 2(182.28)\tan 3^\circ 16' 14'' = 240.83 \text{ ft}$$

Good luck,

