

### Surveying - Traverse

#### Group Example Problem 5

▶ Compute the x and y coordinates from the following balanced.

Side	Bearing degree minutes	Length (ft)	Latitude	Departure	Balanced		Points	Coordinates	
					Latitude	Departure		x	y
AB	S 6 15 W	189.53	-188.403	-20.634	-188.388	-20.601	A	100.000	100.000
BC	S 29 38 E	175.18	-152.268	86.617	-152.253	86.648	B		
CD	N 81 18 W	197.78	29.916	-195.504	29.933	-195.470	C		
DE	N 12 24 W	142.39	139.068	-30.576	139.080	-30.551	D		
EA	N 42 59 E	234.58	171.607	159.933	171.627	159.974	E		
			939.46	-0.079	-0.163	0.000	0.000		

**x coordinates:** A = 100 ft.                      B = A - 20.601 = 79.399 ft.  
**y coordinates:** A = 100 ft.                      B = A - 188.388 = -88.388 ft.

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			939.46	-0.079	-0.163	0.000	0.000		

**x coordinates:** B = 79.399 ft.                      C = B + 86.648 = 166.047 ft.  
**y coordinates:** B = -88.388 ft.                      C = B - 152.253 = -240.641 ft.

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EA	N 42 59 E	234.58	171.607	159.933	171.627	159.974	E		
			939.46	-0.079	-0.163	0.000	0.000		

**x coordinates:** C = 166.047 ft.                      D = C - 195.470 = -29.423 ft.  
**y coordinates:** C = -240.641 ft.                      D = C + 29.933 = -210.708 ft.

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EA	N 42 59 E	234.58	171.607	159.933	171.627	159.974	E		
			939.46	-0.079	-0.163	0.000	0.000		

**x coordinates:** D = -29.423 ft.                      E = D - 30.511 = -59.974 ft.  
**y coordinates:** D = -210.708 ft.                      E = D + 139.080 = -71.627 ft.

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DE	N 12 24 W	142.39	139.068	-30.576	139.080	-30.551	D	-29.423	-210.708
EA	N 42 59 E	234.58	171.607	159.933	171.627	159.974	E	-59.974	-71.627
			939.46	-0.079	-0.163	0.000	0.000		

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## Questions?