

Solving Systems of Equations with Tables and Graphs

Big Ideas: The "solution" to the system is when the two functions are equal. On a graph it is the point where lines cross. It is also known as a *break even point*.

Example:

Ted and Ron are in a 100 yard race. Ted can run 6 yards a second and Ron can run 8 yards a second. Since Ron knows he is faster, he gave Ted a 10 yard head start. Write an equation to represent each runner in the race.

Ted: $y = 6x + 10$ Ron: $y = 8x$

Make a table and graph this situation.

Ted		Ron	
x	y	x	y
0	10	0	0
1	16	1	8
2	22	2	16
3	28	3	24
4	34	4	32
		5	40
		6	48
		7	56
		8	64

Who will win the race? Ron

What proof do you have? table & graph

Use the table and graph to find about when Ron passes Ted, and how many seconds into the race the pass occurred.

5 sec - tied, after that Ron passes

