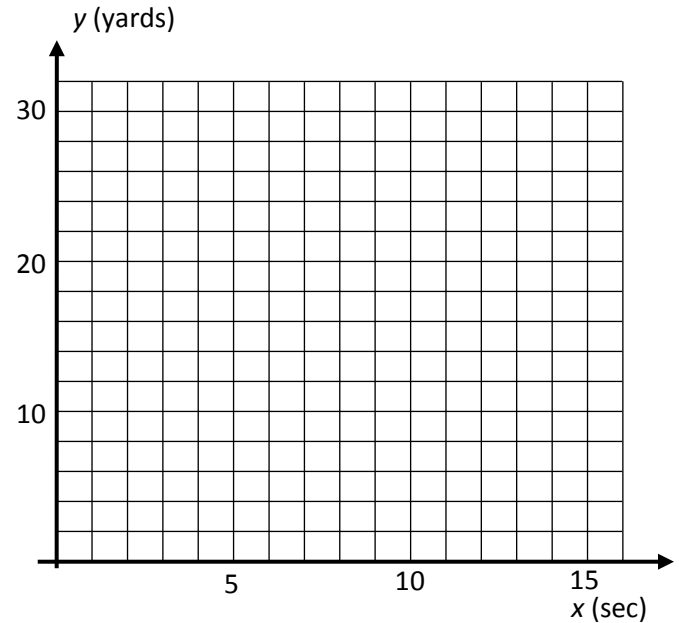




R2. Zeke is racing his little brother Niko. They are running a total of 30 yards and Zeke gives Niko a 12 yard head start. Zeke runs 2 yards every second but Niko only runs 1 yard every 2 seconds. If  $x$  represents the number of seconds they have been racing and  $y$  represents the distance from the start line then:

(a) Fill out the table below for various distances that Zeke and Niko are from the start line at the given times.

$x$ (sec)	Zeke Distance (yds)	Niko Distance (yds)
0	0	12
2		
6		



(b) Based on your calculations for (a) write equations for both Zeke's distance and Niko's distance from the start line as a function of the time,  $x$ .

Zeke's Distance: \_\_\_\_\_

Niko's Distance: \_\_\_\_\_

(c) Graph both of these equations on the grid above and determine the number of seconds it takes for Zeke to catch up to Niko. How far are they from the finish line at that point?

- (a) 19.6  
(b) 36  
(c) 25
- (a) 21  
(b) 20  
(c) \$5.25
- (a) 11.52  
(b) 2.43  
(c) 30.72  
(d) 3.6  
(e) 2.5  
(f) 0.8
- (4)
- (a) 15% of \$8.50 is exactly \$1.275 but we do not use half pennies so his boss would actually give him \$1.28.  
(b) \$9.78/hour
- Imani

R1. (2)

R2. (a)

$x$ (sec)	Zeke Distance (yds)	Niko Distance (yds)
0	0	12
2	<b>4</b>	<b>13</b>
6	<b>12</b>	<b>15</b>

- (b) Zeke's Distance:  $y = 2x$   
Niko's Distance:  $y = .5x + 12$
- (c) 14 seconds and 6 yards

