

Write an equation in standard form to find the minutes someone who weighs 150 lbs. would need to bicycle and swim laps in order to burn 300 calories. Use the table below. Make sure you define your variables and then, graph your equation.

Activity by a 150 lb. person	Calories burned per minute
Bicycling	10
Bowling	4
Hiking	7
Running 5.2 mi/h	11
Swimming, laps	12
Walking 3.5 mi/h	5

$$Ax + By = C$$

$$10x + 12y = 300$$

$x = \#$ of mins bicycling

x-intercept

$$10x + 12(0) = 300$$

$$\frac{10x}{10} = \frac{300}{10}$$

$$x = 30$$

$$(30, 0)$$

y-intercept

$$10(0) + 12y = 300$$

$$\frac{12y}{12} = \frac{300}{12}$$

$$y = 25$$

$$(0, 25)$$

$y = \#$ of mins swimming

$$\begin{array}{r} 25 \\ 12 \overline{) 300} \\ \underline{-24} \\ 60 \\ \underline{-60} \\ 0 \end{array}$$

Burning Calories

* every ordered pair on the line segment is a solution to the problem *

8 mins of bicycling

18 mins of swimming

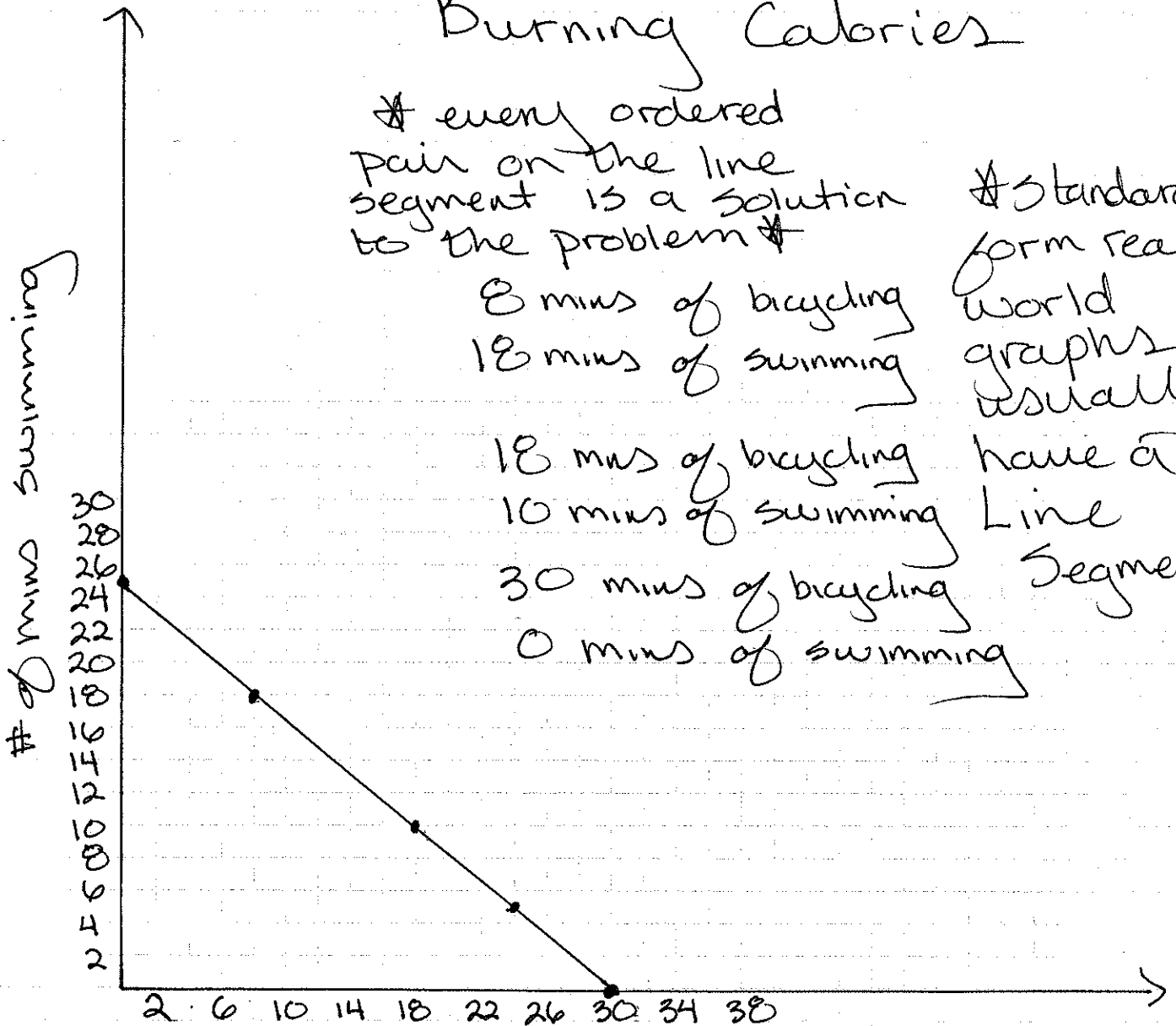
18 mins of bicycling

10 mins of swimming

30 mins of bicycling

0 mins of swimming

* standard form real world graphs usually have a line segment



of mins bicycling