Name_____

# CONSTANT OF PROPORTIONALITY #2

**Directions**: Michael, William, Alexander, and Luke wanted to get in shape for the upcoming basketball season. They decided to run laps around the gym and record the results. Each of the boys tried to keep a steady pace during the laps, but not everyone was able to maintain the same speed throughout the training. The results of their training are listed below.

**Michael**

| Minutes | Laps |
|---|---|
| 1 | 5 |
| 2 | 10 |
| 3 | 15 |
| 4 | 20 |
| 5 | 25 |

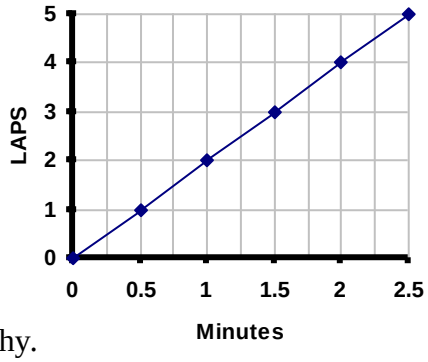
**William**

| Minutes | Laps |
|---|---|
| 2 | 8 |
| 4 | 16 |
| 6 | 22 |
| 8 | 28 |
| 10 | 36 |

**Alexander**

| Minutes | Laps |
|---|---|
| 1 | 0.5 |
| 2 | 1 |
| 3 | 1.5 |
| 4 | 2 |
| 5 | 2.5 |

**Luke**




1) Which of the boy(s) above has results that are not proportional? Explain why.

2) For the boys whose results are proportional, find the constant of proportionality between their laps and minutes.

3) Imagine that you are the fifth participant in the drill. You ran the laps at a rate that was equal to Michael's rate. Complete the table below to show your results at this rate.

| Minutes | Laps |
|---|---|
| 0.5 | |
| 1 | |
| 1.5 | |
| 2 | |
| 5.5 | |

4) On the graph below, plot data points that show a constant of proportionality of 1.5 between the number of laps and the minutes.