Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Tommy and Billy are arguing over who will win in a car race. Tommy says that his car can go ata constant rate of 5 m/s. Billy says that his car can only go at a constant rate of 3 m/s, so he needs a 6m head start. Predict who you think will win the race and then use this information to fill in the following tables for the two boys.

Who do you think will win in a 30 meter race? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Tommy** **Billy**

|  |  |  |  |
| --- | --- | --- | --- |
| Time (s) | Distance (m) | Time (s) | Distance (m) |
| 0 |  | 0 |  |
| 1 |  | 1 |  |
| 2 |  | 2 |  |
| 3 |  | 3 |  |
| 4 |  | 4 |  |
| 5 |  | 5 |  |
| 6 |  | 6 |  |
| 7 |  | 7 |  |

What are the independent and dependent variables in this problem?

Independent? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Dependent? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Use this information to create an equation for each of the bikes using the variables d (distance) and t (time). After creating each equation, plug in values from your table to see if your equation works.

**Tommy:**

**Billy:**

Now plug your equations in on the FluidMath App (Tommy as Car A and Billy as Car B) and press play to see who would win the race. Who was the winner?

Try using some different equations on FluidMath to find out how much of a head start Billy would need to beat Tommy. How much of a head start?

What did you learn from this activity about linear equations?