

Gear Racer Sheet (Lego SM)

Names: _____

Make sure to show your work

Step	Gear Ratio	% Error (accuracy)	Average Speed (m/s)
A			
B			

- After you have completed this activity AND the questions, create a car to win the following Head-to-Head competitions (these will be for bonus points and bragging rights!)
 - 4 meter sprint in the hallway
 - 2 meter sprint up the AI tracks at a 25° angle
 - 2 meter race pulling a 250 gram mass

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Questions:

Explain how, and why, you would change the gearing if you wanted to climb a steep slope.

Explain how, and why, you would change the front wheel if you wanted to be able to turn.

What would you change if you wanted to be able to drive fast along a sloping bank?

Explain how, and why, you would change the rear wheels to make the car go faster.