Friction depending on shapes

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Imagine if the wheels have square, rectangle or triangle. How will you make it move?

If wheels were rectangular, square or triangular, moving a vehicle would be very difficult and uncomfortable.

Difficulty of using other shapes of wheels.

Smoothness of Motion

- Wheels are typically round because this shape allows for smooth, continuous motion and rolls .
- If wheels were any other shape , they would have flat sides and sharp corners.

Efficiency & Energy

- Circular wheel minimize the contact with ground resulting in less friction.
- Wheels with flat sides or corners increases friction making it harder to move, requiring more energy and less movement.

Why round wheels are best?

- A circle has the same distance from its center to any point on its edge, which is called radius.
- This uniform distance ensures that as the wheel moves , it touches the ground at a constant height.
- Due to consistent height it provides smooth ride and movement.

For moving the square, rectangle & triangle wheel we have to do the following things:

Special Track: Design a track with evenly spaced bumps or grooves that match the sides of the square, rectangular, or triangular wheels.

- **Square/Rectangle**: The track should have peaks and valleys that align with the sides of the square or rectangle.
- **Triangle**: The track should have triangular dips that fit the sides of the triangular wheel.

Movement on Track: As the wheels roll over the specially designed track, the bumps or grooves will allow each side of the wheel to transition smoothly, reducing bumps and maintaining stability.

By using a track that complements the shape of the wheels, you can achieve smoother movement despite the unconventional wheel shapes.