

The background is a dark, textured surface resembling a chalkboard. It features faint, light-colored chalk drawings of various scientific and mathematical concepts. On the left, there is a large, detailed drawing of a microscope. Above it, a globe is visible. In the top left corner, there are some geometric shapes, including a large 'V' and a rectangle. At the bottom, there are more geometric shapes, including a cross and a rectangle, as well as some mathematical symbols like a percentage sign and a less-than sign. The overall theme is science and mathematics.

Friction depending on shapes

Name : Y. Dhurvish
Roll no. 24

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.