

CERTIFICATE

This is to certify that project titled "Real Life App of Mathematics" submitted by Achint Singh of Class X for the academic session 2025-26 is an original work completed under my supervision.

The data and info presented in this project are true and based on real-life applications of mathematics in day-to-day situations.

[Raman Mam]
Mathematics Teacher

Date:- June 6, 2025

ACKNOWLEDGEMENT

I would like to express my heartfelt gratitude to my Mathematics teacher, [Raman Mam], for the valuable guidance, support, and encouragement throughout this project.

I am also thankful to all sources that helped me understand the topic better and complete this work successfully.

— Achint Singh

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APPLICATION OF ANGLES IN SPORTS

Mathematics plays a crucial role in sports. Angles are especially important in games like cricket, basketball, football etc.

⇒ In cricket, the angle of the bat swing affects the direction and distance of the shot.

⇒ In basketball, players aim at the hoop using a certain release angle for accurate throws.

⇒ In football, players pass the ball using specific angles to avoid defenders and reach teammates.

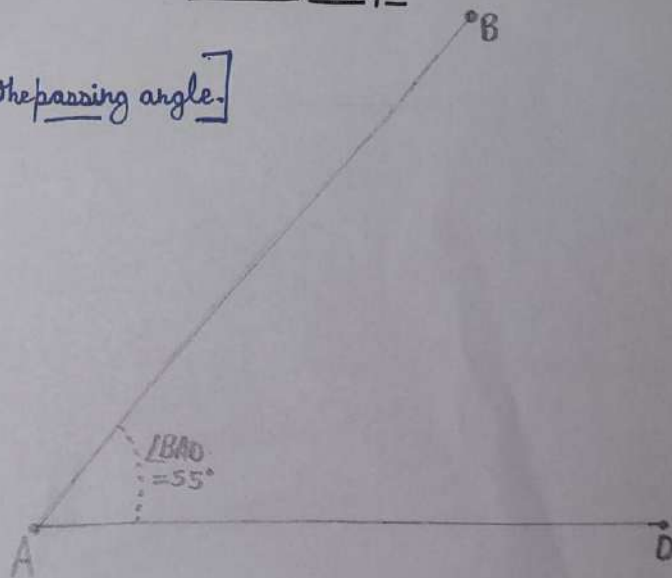
Geometry also helps in player positioning on the field, creating passing triangles and strategic zones.

Coaches use angles and distances to optimize player movement and game plans.

[See figure 1 back]

Football Example

The Angle at A shows the passing angle.



Player A : With the ball

Player B : Teammate receiving the pass

Player D : Defender

MOBILE BILL DATA ANALYSIS

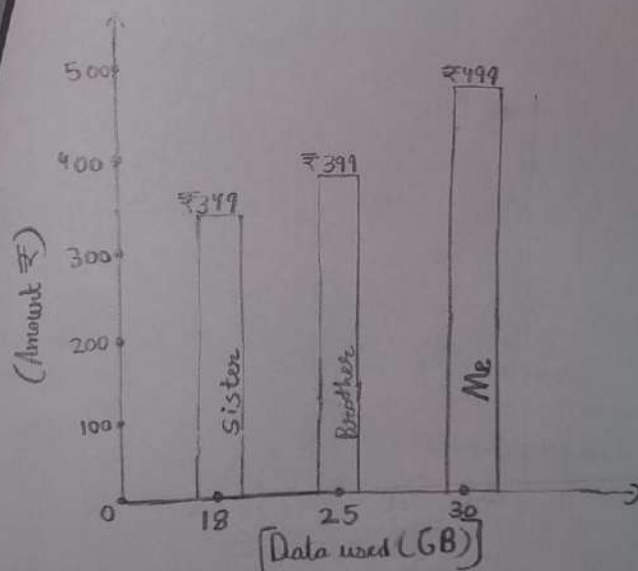
I collected my Family's mobile bills for the past 3 months. The following data compares usage and cost for each member.

Person	Plan name	Data used (GB)	Total cost (₹)
Brother	Plan A	25	₹ 399
Sister	Plan B	18	₹ 349
Me	Plan A	30	₹ 499

Using this data, I created Bar graph to visually compare cost vs. usage.

[See figure 2 back]

Bar Graph [Mobile Bill Comparison]



They ring together after: $L.C.M(30, 45) = 90$ seconds.

2. A bell rings every 15 min and another every 20 min.
They ring together after: $L.C.M(15, 20) = 60$ min.

H.C.F AND L.C.M

H.C.F and L.C.M are useful in solving timing and grouping problems in real life.

1. Two traffic lights blink every 30 and 45 seconds. They will blink together after: $L.C.M(30, 45) = 90$ seconds.

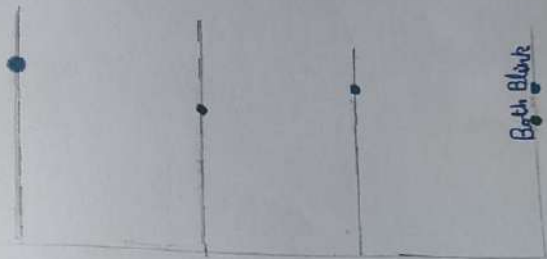
2. A bell rings every 15 min and another every 20 min. They ring together after: $L.C.M(15, 20) = 60$ min.

3. Two people jog around a park in 12, 18 min. They will meet at the starting point after: $L.C.M(12, 18) = 36$ min

4. H.C.F ex:- 36 pens and 60 pencils are to be packed into equal boxes: $H.C.F(36, 60) = 12 \rightarrow 12$ boxes need.

[See figure 3 back]

Blinking Lights - L.C.M Timeline



• Light A
(30s)

• Light B
(45s)

Through this project, I explored how mathematical concepts are applied in real-life situations.

From analyzing angles in sports to comparing mobile data usage and solving everyday H.C.F and L.C.M problems, I have learned that mathematics is not just theoretical - it is practical and everywhere around us.

Ladder Method - H.C.F and L.C.M

$$\begin{array}{r|l} 2 & 36, 60 \end{array}$$

$$\begin{array}{r|l} 2 & 18, 30 \end{array}$$

$$\begin{array}{r|l} 3 & 9, 15 \end{array}$$

$$\begin{array}{r|l} 3 & 3, 5 \end{array}$$

$$\begin{array}{r|l} 5 & 1, 5 \end{array}$$

$$\begin{array}{r|l} 1 & 1, 1 \end{array}$$

→ H.C.F: $2 \times 2 \times 3 = 12$

→ L.C.M: $2 \times 2 \times 3 \times 3 \times 5 = 180$

CONCLUSION

Through this project, I explored how mathematical concepts are applied in real-life situations.

From analyzing angles in sports to comparing mobile data usage and solving everyday H.C.F and L.C.M problems, I have learned that mathematics is not just theoretical - it is practical and everywhere around us.

This project enhanced my logical thinking, problem-solving ability, and understanding of data handling and geometry in daily life.

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