## AFRICAN INSTITUTE FOR MATHEMATICAL SCIENCES SCHOOLS ENRICHMENT CENTRE (AIMSSEC) AIMING HIGH

## THE SIEGE GAME



Play the game using the gameboard on page 2. The winner is the first player to capture three roads going to, or through, the same town and put the town under siege.

The roadmap shows 9 straight lines representing roads $\mathrm{R}_{1}, \mathrm{R}_{2}, \mathrm{R}_{3}, \ldots$ R9 and 8 towns $\mathrm{T}_{1}, \mathrm{~T}_{2}, \mathrm{~T}_{3}, \ldots . \mathrm{T}_{8}$, shown in yellow. The roads go to, or through, the towns.

Some roads connect 2 towns, some connect 3 towns, and one road connects 4 towns but all towns lie on exactly 3 roads.

Players take it in turns to claim and block one of the 9 straight roads by putting a counter on the board or marking the road with a highlighter pen, closing the whole road even though it may pass through several towns.

## HELP

Play the game and keep a watch on what your opponent does. Make sure you claim the third road if your opponent claims two roads through the same town.

## NEXT

Answer these questions:

1. Is the Siege Game like any other games you have played before?
2. For each town can you write down the combination of three roads that go through that town?
3. Which roads go through 2 towns?
4. Which roads go through 3 towns?
5. Which roads go through 4 towns?
6. Are any towns on 4 roads?
7. Have you found a winning strategy?
8. Is it possible to avoid losing this game?
9. Can you become an expert and never lose this game, although the game may sometimes end in a draw?

