

5 Soccer

Author Gerhard Woeginger (TU Eindhoven) Project: 4TU.AMI

Challenge

Six soccer teams from the cities Icetown, Frostville, Glacierhampton, Coldbury, Snowham, and Winterfield have participated in the Christmas soccer tournament. During this tournament, each team played exactly one match against each of the other five teams. A victory scored three points, a draw one point, and a loss zero points.

Icetown won the tournament. Frostville ended up in second place, two points behind Icetown. Glacierhampton reached the third place, two points behind Frostville. At the fourth position was Coldbury, two points behind Glacierhampton. Snowham was two points behind Coldbury. Winterfield finished last, two points behind Snowham.

Which of the following ten statements **necessarily** follows from the above information?



Artwork: Julia Nurit Schönnagel

Possible answers:

- 1. Icetown beat Frostville and Glacierhampton.
- 2. Icetown beat Coldbury and Winterfield.
- 3. Frostville lost against Glacierhampton and won against Snowham.
- 4. Glacierhampton beat Coldbury and Snowham.
- 5. Glacierhampton beat Frostville and Coldbury.
- 6. Coldbury lost against Icetown and Glacierhampton.
- 7. Coldbury lost against Snowham and won against Winterfield.
- 8. Snowham lost against Icetown and Coldbury.
- 9. Winterfield lost against Icetown and Frostville.
- 10. Winterfield lost against Coldbury and played draw against Glacierhampton.