

Flanders Junior Olympiad 2003

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by Peter

- 1 Playing soccer with 3 goes as follows: 2 field players try to make a goal past the goalkeeper, the one who makes the goal stands goalman for next game, etc.

Arne, Bart and Cauchy played this game. Later, they tell their math teacher that A stood 12 times on the field, B 21 times on the field, C 8 times in the goal. Their teacher knows who made the 6th goal.

Who made it?

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- 2 Through an internal point O of $\triangle ABC$ one draws 3 lines, parallel to each of the sides, intersecting in the points shown on the picture.

http://www.mathlinks.ro/Forum/album_pic.php?pic_id=289

Find the value of $\frac{|AF|}{|AB|} + \frac{|BE|}{|BC|} + \frac{|CN|}{|CA|}$.

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- 3 Yesterday (=April 22, 2003) was Gittes birthday. She notices that her age equals the sum of the 4 digits of the year she was born in.
How old is she?

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- 4 The points in the plane with integer coordinates are numbered as below.

http://www.mathlinks.ro/Forum/album_pic.php?pic_id=288

What are the coordinates of the number 2003?
