

Football Champ



Three teams A, B and C have each played two matches.

Three points are given for a win and one point to each team for a draw.

The table below gives the total number of points and goals scored for and against each team.

Fill in the table and find the scores in each match.

Teams	Games Played	Won	Drawn	Lost	Goals For	Goals Against	Points
A	2				5	3	3
B	2				2		1
C	2				3	2	4

If you want to try other problems similar to this see

Olympic Logic: <http://nrich.maths.org/8073>

and **Medal Muddle** <http://nrich.maths.org/661>

Solution:

B must draw one match and lose one match because B scored only 1 point and the score must be 0-0 or 1-1 or 2-2

C must win one match and draw one to make 4 points

So A must win one match against B and lose one match to C.

Case 1 If the B/C draw is 0-0 then C scores 3-2 against A and A scores 3-0 against B but this is impossible because it gives 0 goals for B whereas B scores 2 goals in total.

Case 2 If the B/C draw is 1-1 then C scores 2-1 against A and A scores 4-1 against B so B scores 2 goals in total and has 5 goals scored against.

Case 3 If the B/C draw is 2-2 then C can only score one goal in the match against A so the C/A match is 1-0
So A must score 5-2 against B but this is impossible because it gives 4 goals for B whereas B only scores 2 goals in total.

So the solution is

B and C draw is 1-1

C beats A 2-1

A beats B 4-1

and B has 5 goals scored against it.