**The Algebra Tour de France**

Substitute a value into each set of instructions to calculate each team’s final position in the Tour.

Pick a positive integer (don’t make it too big), and see what order the teams finish.

Compare your order with other people – do they agree with your answer?

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| **BMC Racing** | **Etixx- Quick Step** | **Tinkoff-Saxo** | **Sky** | **Giant-Alpecin** | **AG2R La Mondiale** | **Movistar** | **Cofidis, Solutions Credits** | **Katusha** | **Cannondale-Garmin** |
|  |  |  |  |  |  |  |  |  |  |
| Add 3;  Multiply by 2;  Add 6;  Halve;  Subtract the number you started with. | Add 7;  Multiply by 3;  Subtract 6;  Divide by 3;  Subtract the number you started with. | Add 10;  Add the number you started with;  Subtract 4;  Halve;  Subtract the number you started with. | Multiply by 4;  Add 12;  Halve;  Add 2;  Halve;  Subtract the number you started with. | Add 15;  Add the number you started with;  Add 5;  Divide by 2;  Subtract the number you started with. | Add 1;  Multiply by 5;  Add 10;  Multiply by 2;  Subtract 10;  Halve;  Divide by 5;  Subtract the number you started with. | Multiply by 4;  Add 8;  Multiply by 2;  Subtract 8;  Divide by 4;  Divide by 2;  Subtract the number you started with. | Add 3;  Multiply by 3;  Subtract the number you started with;  Subtract 1;  Subtract the number you started with twice. | Add 5;  Multiply by 3;  Add 6;  Divide by 3;  Subtract the number you started with. | Add 6;  Multiply by 4;  Add 3;  Subtract the number you started with;  Divide by 3;  Subtract the number you started with. |
| Pos: ……… | Pos: ……… | Pos: ……… | Pos: ……… | Pos: ……… | Pos: ……… | Pos: ……… | Pos: ……… | Pos: ……… | Pos: ……… |

Will the teams always finish in this order?

Explain and prove your answer.