Walkthrough for Easter Egg Logic Puzzle

This was edited from what I did to plan it and make sure it all made sense, so as a result there's a good chance some of this in fact does not make sense :)
Feel free to message me if you have any clarifying questions!

Start: We are given 1 and 24.

1: Orange eggs are all consecutively diagonally adjacent. Column 3 is comprised of all warm colored eggs.
24: There are exactly 3 Red eggs and two are multiples of 7. There is exactly one Yellow egg in each column. No Orange eggs are in the Fibonacci Sequence.

→ since column 3 has to be a warm color (Red, Orange, Yellow), and exactly one has to be Yellow, there are three between Red and Orange. We know that two Red have to be multiples of 7 (7, 14, 21). Since Orange cannot be in 3 or 21 (Fibonacci), they can only be in 9 or 15. But since they must be diagonally adjacent in a string to all other O, they cannot be orthogonally adjacent. (See next clue visual for a better explanation as to why if you can't see it). Therefore only one Orange can be in column 3. Thus there must be two Red – but since two of the three total must also be multiples of 7, one of them has to be in 21 to fulfill both of these requirements.

21: Row 1 contains all colors.

→ Since we know that the two remaining Red have to be 1 in either 7 or 14 (multiples of 7) and one in column 3, the one in column 3 must be in the first row to fulfill this clue. Therefore, 3 is Red.

→ Let's think about the Orange eggs for a second. We know that none are in the Fibonacci sequence (0,1,1,2,3,5,8,13,21,34…). We also know that there must be exactly one in the first row. Putting these two together, there must be one Orange egg in either 4 or 6, and one in either 9 or 15 (from earlier deductions). If we were to put the Orange in column 3 in 15, see what happens when you try to travel to 4 or 6 using diagonal hops (as all Orange eggs must be diagonally adjacent in a sequence).

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24

← Red shaded is anywhere it is possible to move via diagonals from 15

You'll see that it is impossible. Therefore, the Orange egg in column 3 must be in space 9.

→ Since we've filled in 3 of the spots in column 3, we know that there still has to be a Yellow in each column. Therefore 15 is a Yellow egg.

3: There are exactly 2 Yellow eggs in the top half of the cartons.

9: Row 2 is the only row in which the ratio of warm to cool eggs is not equal. There are more warm eggs than cool eggs in this row.

→ From 3, we know that there are exactly 2 Yellow eggs in row 1 and 2. We know there must be exactly 1 in row 1, so there then must be exactly 1 in row 2. We already know that there is 1 orange in row 2. To reach majority, we need at least two more warm (ROY) colored eggs. There could only possibly be one Red egg in row 2 at 7. This means we must have at least one more Orange egg in row two. Using the same idea we did with possible diagonal jumps above (under clue 21), we can see that the only possible places for Orange eggs in row 2 would be in 7 and 11. Regardless of whether 7 is Red or Orange, we would need 11 to be Orange in order to reach the majority for warm colors in row 2. Thus 11 is Orange.

15: All corners are different colors. There are no more than 2 of each color in a row.

11: There are 4 Orange eggs.

→ Going back to what we deduced in clue 9, we know that 7 must either be Red or Orange. If 7 was Orange, we would need to reach it via diagonal hops from 9. However, since 11 is Orange, we'll see that it would take us at least 5 hops to get to 7 since all Orange must be in a continuous string of diagonal hops. Therefore, 7 must be Red.

→ Since 7 is Red, the Yellow in column 1 must be 13 or 19. The clue in 15 tells us that all corners are different colors and we already know that 24 is Yellow, so 19 cannot be Yellow. Therefore 13 is Yellow.

7: The bottom right sextant is comprised of two colors.

13: 16 is adjacent to 3 Yellow eggs.

→ Since there is only one Yellow egg in each column, 16 must be adjacent to the Yellow egg in columns 3, 4, and 5. This leaves the Yellow egg in column 5 to be in either 17 or 23. However, there are already 2 Yellow eggs in row 3, which means that 17 cannot be a Yellow egg (clue 15). Therefore 23 must be Yellow.

→ For the Yellow egg in column 4, we just determined the second Yellow egg in row 4 meaning 22 cannot be Yellow. This leaves 10 to be the last Yellow egg 16 is adjacent to.

→ Since there must be one Yellow egg in the top row, this leaves it to be 2 (column rule).

23: No Purple eggs are adjacent to any Orange eggs. There is more than 1 of each color egg.

10: If 18 is Green, then 14 is also Green.

→ Take a look at the clue from 7. The bottom right sextant is 17, 18, 23, and 24. We already know that 23 and 24 are Yellow, and they must be the only Yellow eggs in their respective columns. This means that both 17 and 18 must be the same color. If 18 is Green, then 17 must be Green also. But then if 14 also has to be Green, we violate the rule that there cannot be more than two of a color in the same row. So 18 cannot be Green. By extension, 17 cannot be Green either. Let's look at what colors could be here: We've placed all three Reds, Orange would be orthogonally adjacent to another Orange which we can't have, Yellow would violate the one-per-column rule, Green doesn't work, and Purple would be adjacent to an Orange. Therefore by process of elimination, both 17 and 18 must be Blue.

2: Two of the Green eggs are in odd positions.

→ After determining 17 and 18, there are only two odd positions left: 19 and 5. So both of these are Green.

18: Columns cannot have more than 2 of the same color.

5: Each Green egg is orthogonally adjacent to at least one Blue egg.

→ The only way for 19 to be orthogonally adjacent to a Blue egg is for 20 to be Blue.

→ Clue 23 tells us there must be another Purple egg. The only spot for one to be not adjacent to any Orange eggs is 22, so 22 must be Purple.

→ Since 22 is Purple, that means that 16 cannot be Orange. In order to fit our 4 Orange eggs while keeping the diagonal rule and having only one in the first row, 14 and 4 will need to be Orange.

→ Since we filled in 4, we know that 6 must be Blue so that one of each color is in row 1.

→ Look at 8: through process of elimination, it cannot be Red (have all three), Orange (have all four, would disrupt diagonal rule), Yellow (one per column), Green (no place for a Blue egg adjacent), and Purple (is adjacent to Orange). Therefore, 8 must be Blue.

→ For many of the same reasons, 16 cannot be Red, Orange, Yellow, Blue (violates no more than 2 per row), or Purple. Therefore, 16 must be Green.

→ 12 should be the last remaining egg. It cannot be Red, Orange, Yellow, or Purple for the same reasons as above. 18 tells us that columns cannot have more than two of the same color, so it cannot be Blue either. Therefore 12 is Green.

Final Grid:

P 1	Y 2	R 3	O 4	G 5	B 6
R 7	B 8	O 9	Y 10	O 11	G 12
Y 13	O 14	Y 15	G 16	B 17	B 18
G 19	B 20	R 21	P 22	Y 23	Y 24