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Math Homework: Hunting for Averages

How I figured it out:

The rules say the number in each box has to be the average of the 4 circles around it.

But the two boxes are touching each other! That means the left box counts as a number for the right box, and the right box counts as a number for the left box.

Let's call the left box **X** and the right box **Y**.

My Equations:

For the left box X, the numbers around it are 7, 20, 2, and Y.

$X = (7 + 20 + 2 + Y) \div 4$

$4 \times X = 29 + Y$

For the right box Y, the numbers around it are 15, 3, 1, and X.

$Y = (15 + 3 + 1 + X) \div 4$

$4 \times Y = 19 + X$

$X = (4 \times Y) - 19$

Finding the numbers:

Now I change the X in my first equation to be $(4 \times Y) - 19$.

$4 \times ((4 \times Y) - 19) = 29 + Y$

$(16 \times Y) - 76 = 29 + Y$

Move the Y to one side and numbers to the other side:

$(15 \times Y) = 29 + 76$

$15 \times Y = 105$

$Y = 105 \div 15$

Y = 7

Now that I know Y is 7, I can easily find X:

X = (4 × 7) - 19

X = 28 - 19

X = 9

My Final Answers:
Left Box = 9
Right Box = 7

Checking my answers to be sure:

Left box average: (7 + 20 + 2 + 7) ÷ 4 = 36 ÷ 4 = 9. It works!

Right box average: (15 + 3 + 1 + 9) ÷ 4 = 28 ÷ 4 = 7. It works too!