

Break-In Boxes

To break-in to your box you will need to solve the following puzzles to uncover the 3 digits that will unlock your padlock.

PUZZLE 1. The sum of "x" will give you one digit that you need.

$$9 = 90$$

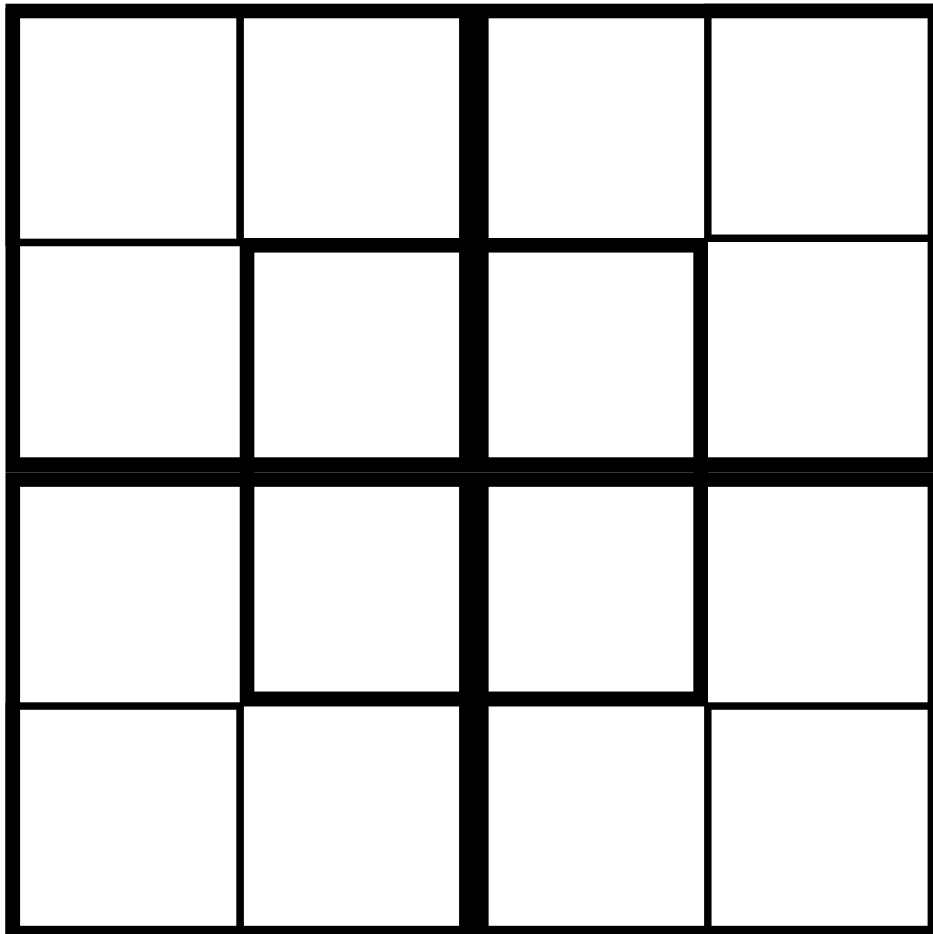
$$8 = 72$$

$$7 = 56$$

$$6 = 42$$

$$3 = x$$

PUZZLE 2. How many squares are there? Now, multiply the digits in the answer.



PUZZLE 3. I am a three digit number. My tens digit is double my ones digit. The hundreds digit is 6 less than the tens digit. What am I?

XXX

The sum of the sum of my digits will be your final digit to unlocking the padlock!

If you've solved these puzzles correctly, you should have three single-digit numbers. But, can you put them in the right order to unlock the padlock?!

9	3	5
----------	----------	----------

Two numbers are correct but wrongly placed.

5	9	4
----------	----------	----------

Only one number is well placed.

3	0	9
----------	----------	----------

Two numbers are correct but only one is well placed.

3	9	6
----------	----------	----------

One number is wrongly placed.

The code to unlock the padlock is:

<input type="text"/>	<input type="text"/>	<input type="text"/>
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**HINTS
ON NEXT
PAGE!**

Break-In Boxes

To break-in to your box you will need to solve the following puzzles to uncover the 3 digits that will unlock your padlock.

PUZZLE 1. The sum of "x" will give you one digit that you need.

So $9 \times 10 = 90$, $8 \times 9 = 72$, and so on.
But to solve for "X" you need to look at what numbers are missing. "X" will be a two-digit number, add them together and you have your answer.

$$9 = 90$$

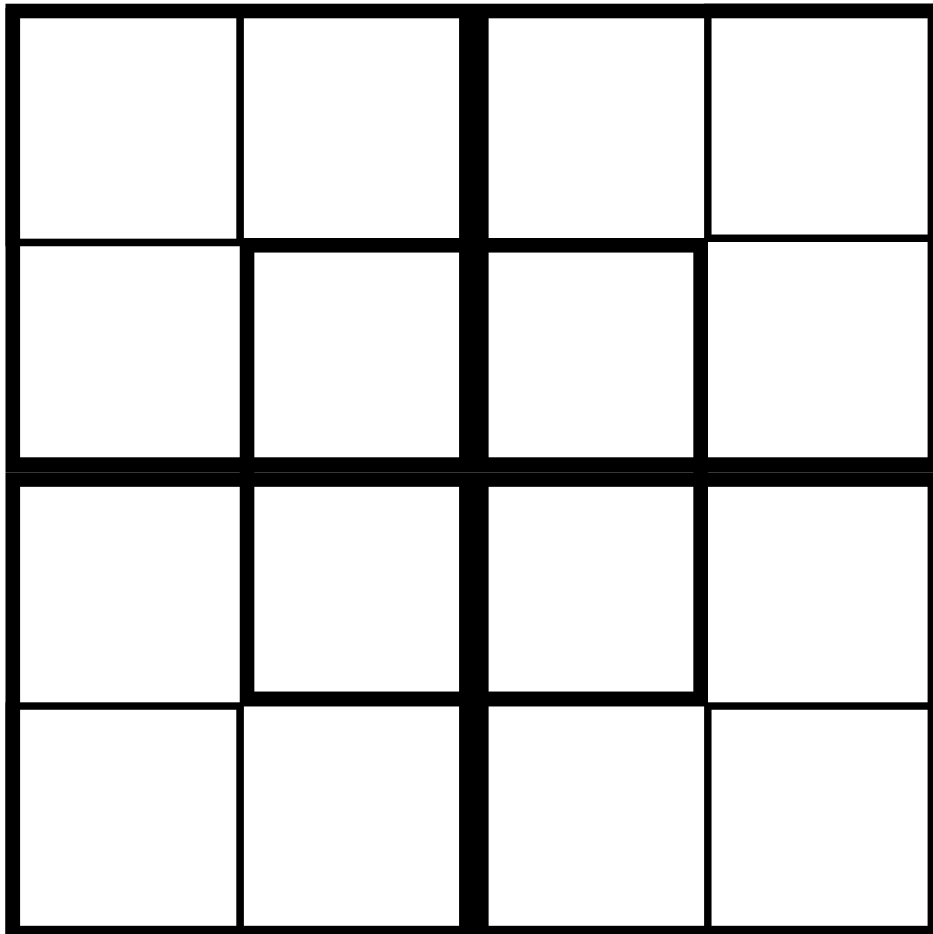
$$8 = 72$$

$$7 = 56$$

$$6 = 42$$

$$3 = X$$

PUZZLE 2. How many squares are there? Now, multiply the digits in the answer.



There are more squares than you think! Count all the 1-by-1 squares, then the 2-by-2 squares, and so on.

PUZZLE 3. I am a three digit number. My tens digit is double my ones digit. The hundreds digit is 6 less than the tens digit. What am I?

XXX

The sum of the sum of my digits will be your final digit to unlocking the padlock!

Start by figuring out the tens digit, since that going to be the biggest. Start with 9 and work backwards until the ones digit and the hundreds digit work. Then, if the number was 789 (which it's not) you need to add the digits together until you get a single digit number...so $7+8+9=24$ then $2+4=6$

If you've solved these puzzles correctly, you should have three single-digit numbers. But, can you put them in the right order to unlock the padlock?!

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Only one number is well placed.

3	0	9
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Two numbers are correct but only one is well placed.

3	9	6
---	---	---

One number is wrongly placed.

Once you have the three correct answers this should be pretty simple to help you determine the order they go in to unlock the box!

The code to unlock the padlock is:

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If you're stuck and need a hint (or two) email Bree at bcomeau@minlib.net!

**ANSWERS
ON NEXT
PAGE!**

ANSWERS

PUZZLE 1. The sum of "x" will give you one digit that you need.

$$9 = 90$$

$$8 = 72$$

$$7 = 56$$

$$6 = 42$$

$$5 = 30$$

$$4 = 20$$

$$3 = 12$$

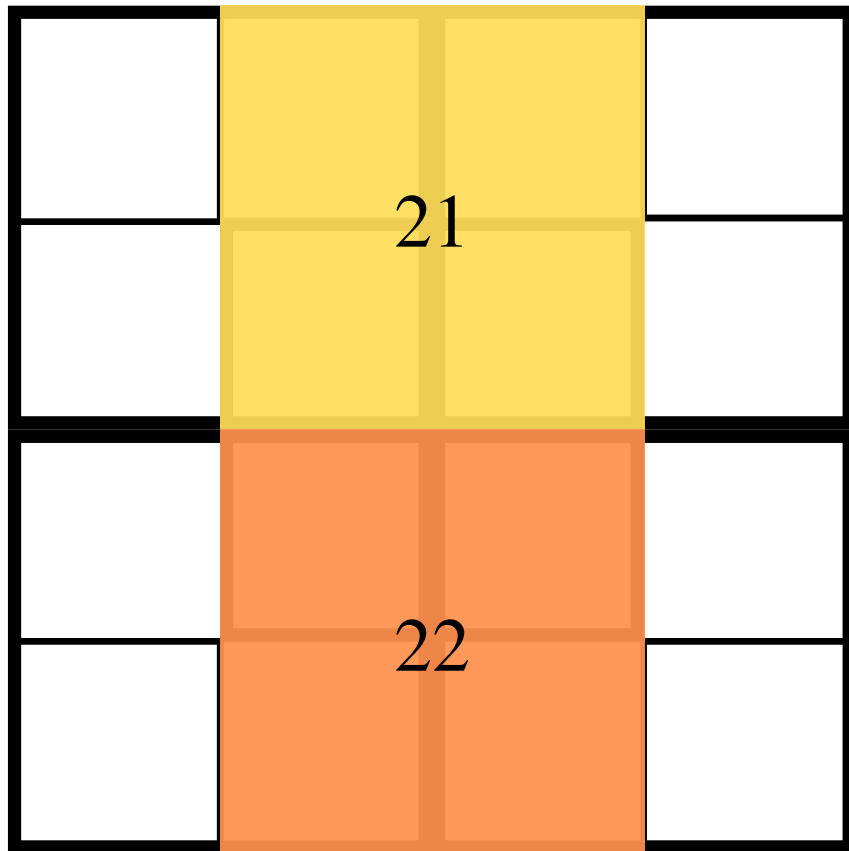
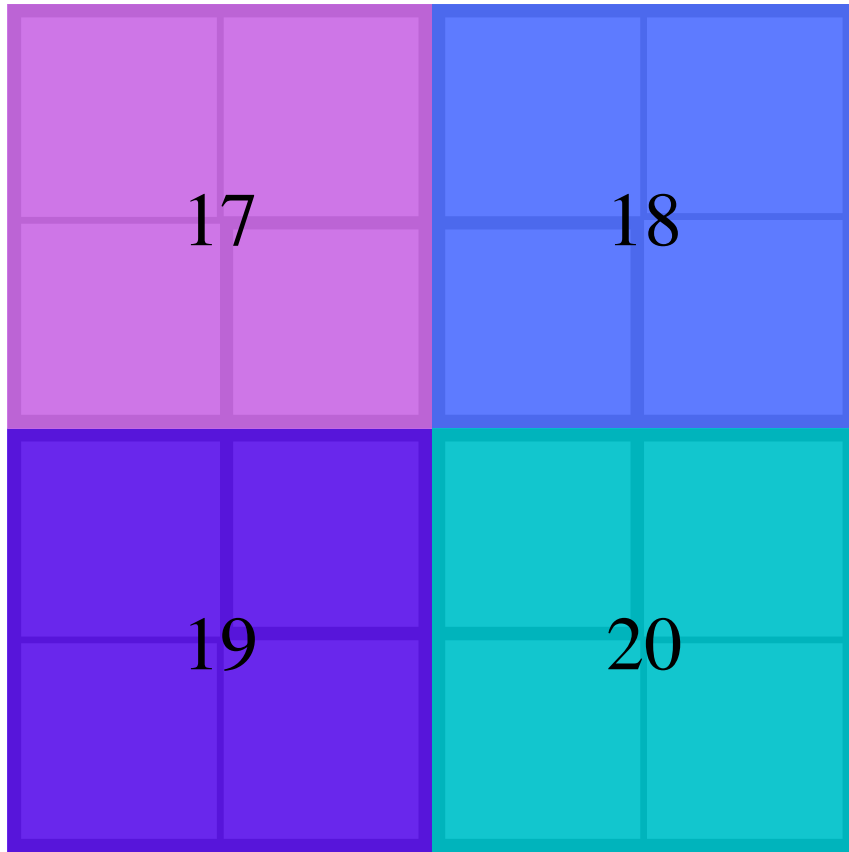
x = 12 but we need a single digit number, so:

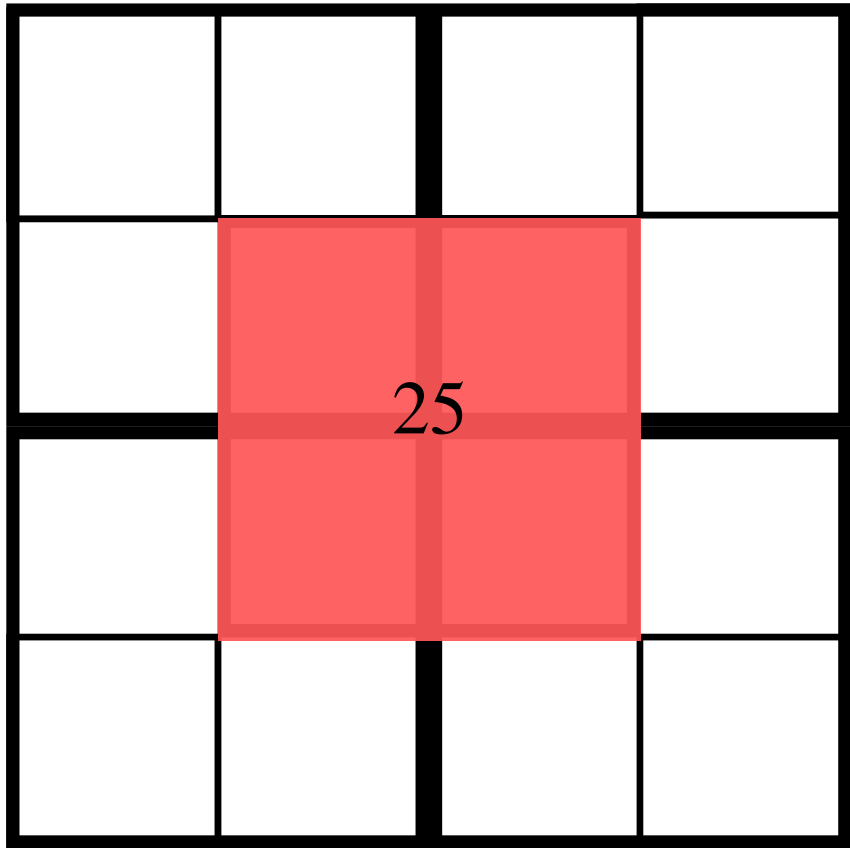
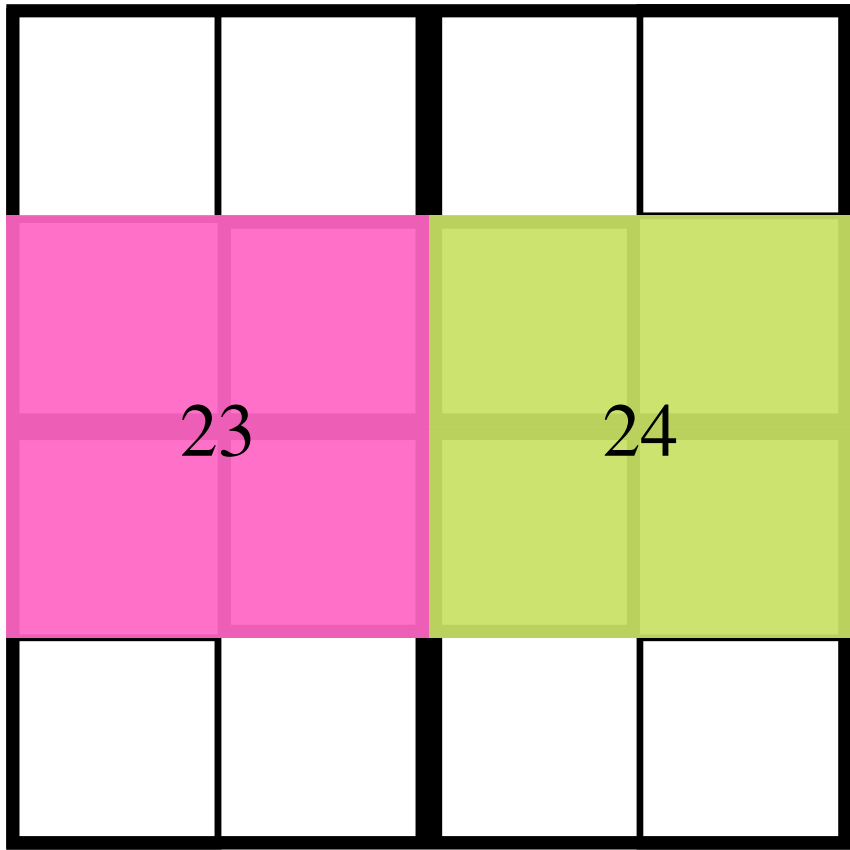
$$1 + 2 = 3$$

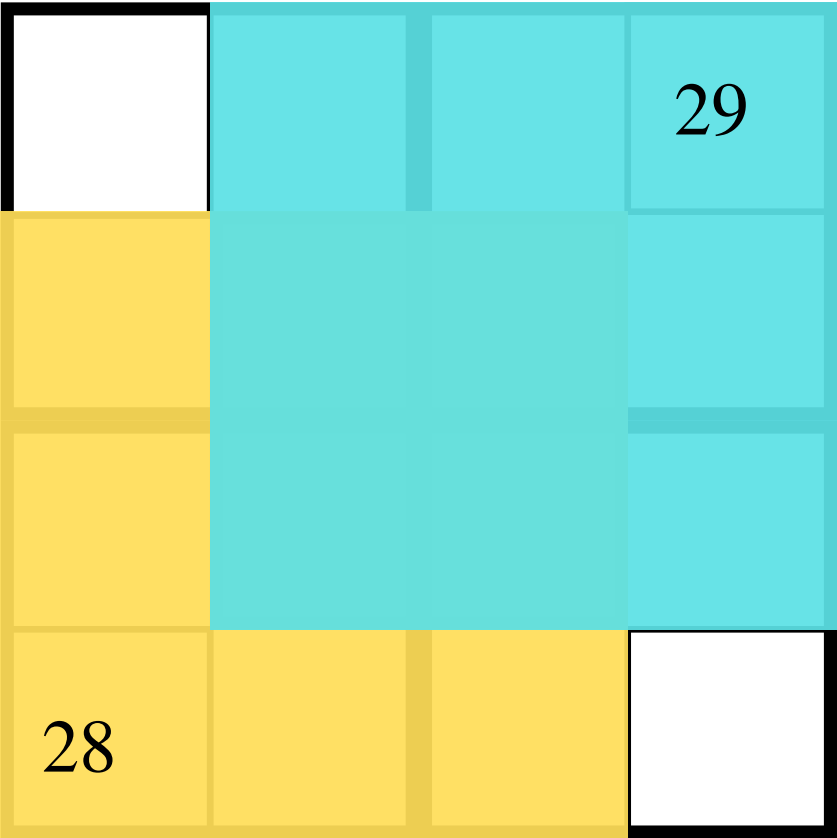
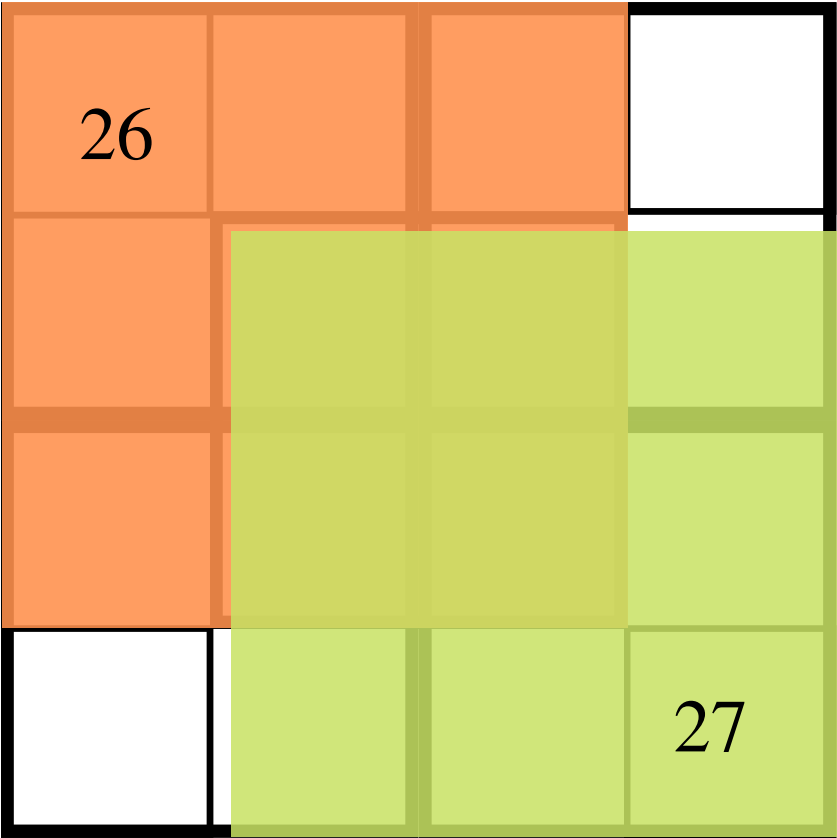
3

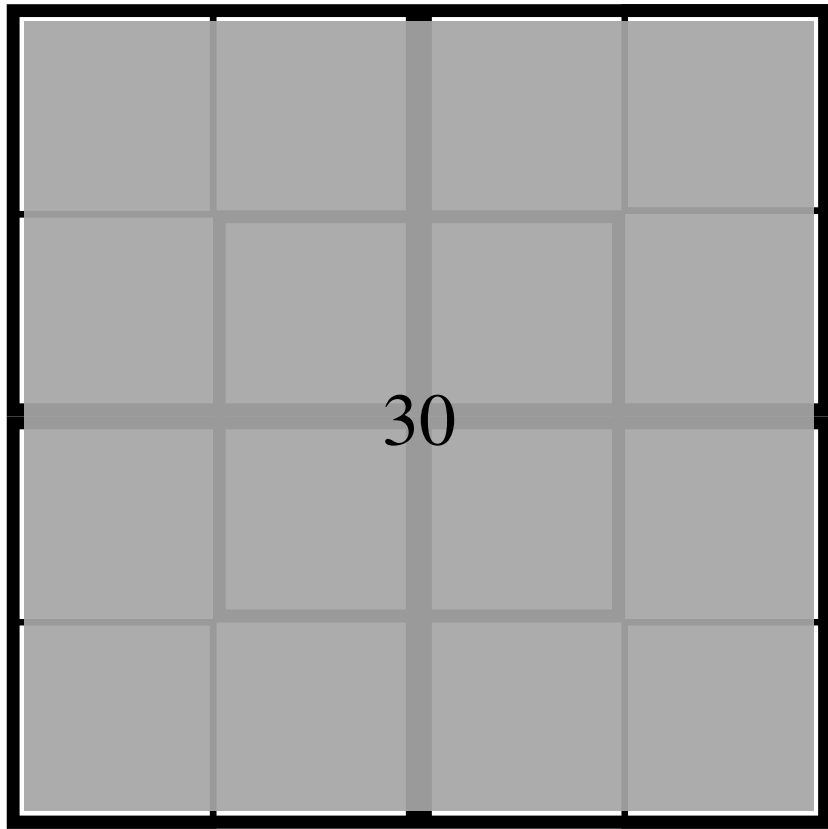
PUZZLE 2. How many squares are there? Now, multiply the digits in the answer.

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16









**There are 30 squares total. But again, we need a single digit number.
This time, we're told to multiply the digits together so:**

$$3 \times 0 = 0$$

0

PUZZLE 3. I am a three digit number. My tens digit is double my ones digit. The hundreds digit is 6 less than the tens digit. What am I?

284

The sum of my sum will be your final digit to unlocking the padlock!

$$2 + 8 + 4 = 14$$

$$1 + 4 = 5$$

5

If you've solved these puzzles correctly, you should have three single-digit numbers.

3 0 5

But, can you put them in the right order to unlock the padlock?!

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The code to unlock the padlock is:

5	0	3
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