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Hide the Pixels

Adapted from youcubed WIM Tasks

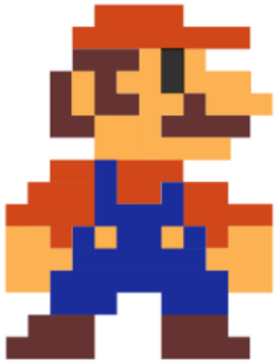
https://www.youcubed.org/wim/hide-the-pixels-3-5/

Slide-deck created and shared by Lori Fury

About Pixel Art

Once upon a time, before computers were as powerful as they are today, the only way to make images was pixel by pixel. (Think Minecraft)

Here are some sample pixel art pieces: https://design.tutsplus.com/articles/what-is-pixel-art--cms-21759



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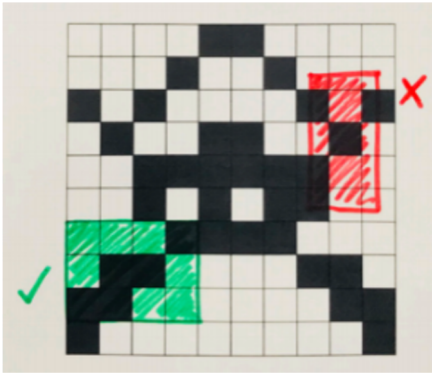
Play Hide the Pixels. What's the lowest score?

Cover all of the colored pixels using rectangles. Your rectangles may cover black and white squares.



To calculate your score, do the following.

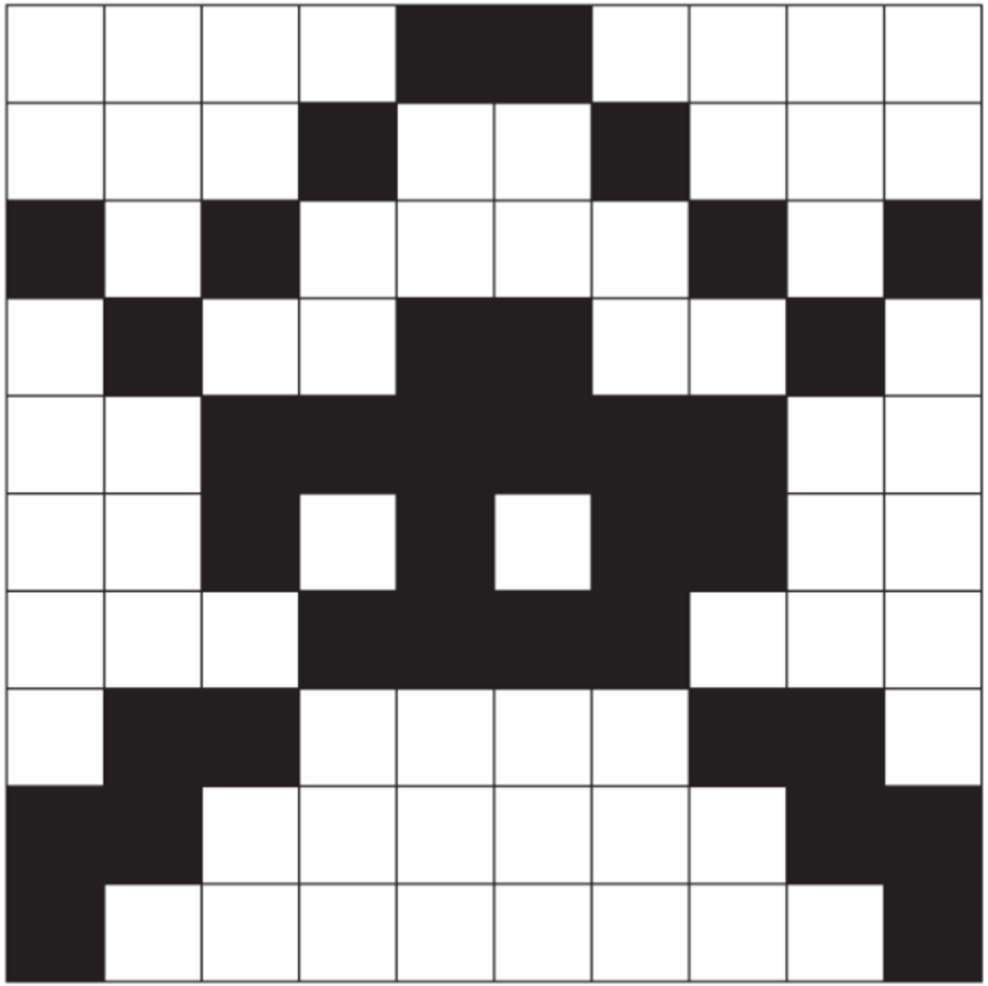
- How many small squares did you cover with rectangles? △
- How many rectangles did you use? □
- Multiply the number of rectangles times itself □ x □ = ○

Add the number of small squares you covered with rectangles to the square of the number of rectangles.

△ + ○ = ▭

Your Score

Try to get the lowest score possible!



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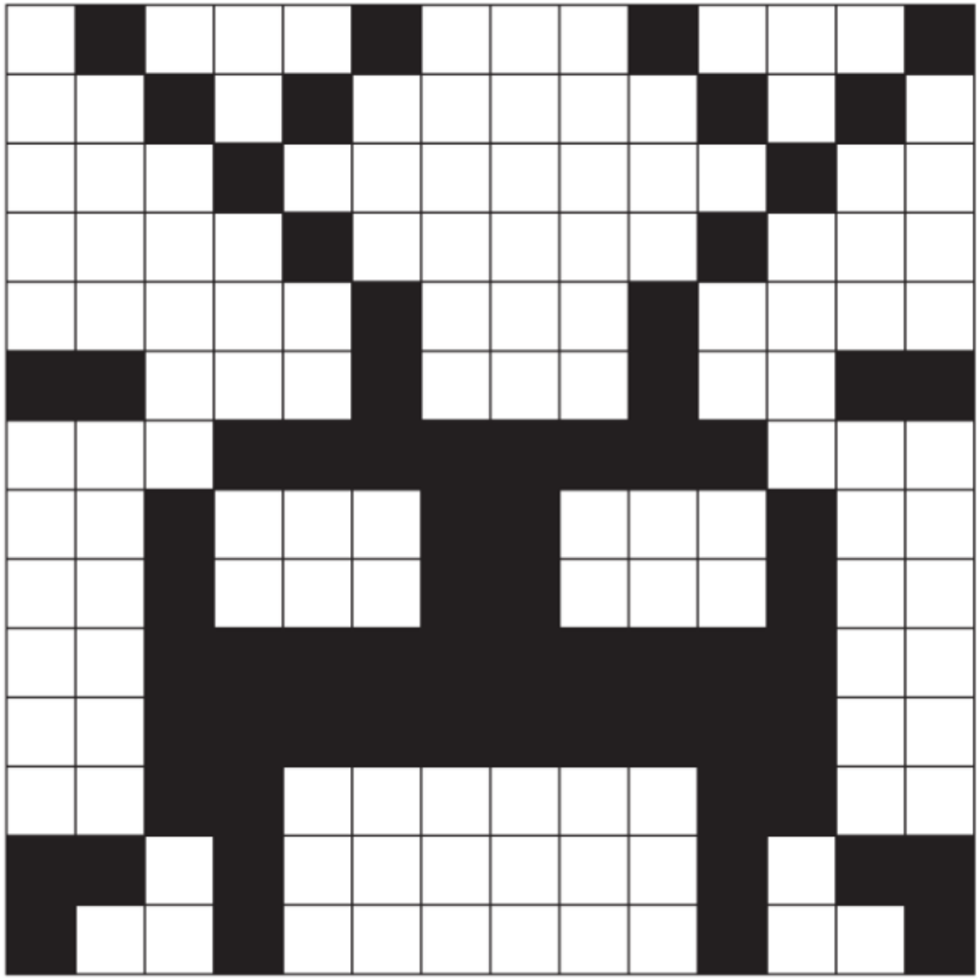

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Discussion: What's the lowest score?

What strategies did you use?

What was useful at organizing your data?

Number of Rectangles Used	Square of Number of Rectangles Used	Area of Rectangles	Score

x	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

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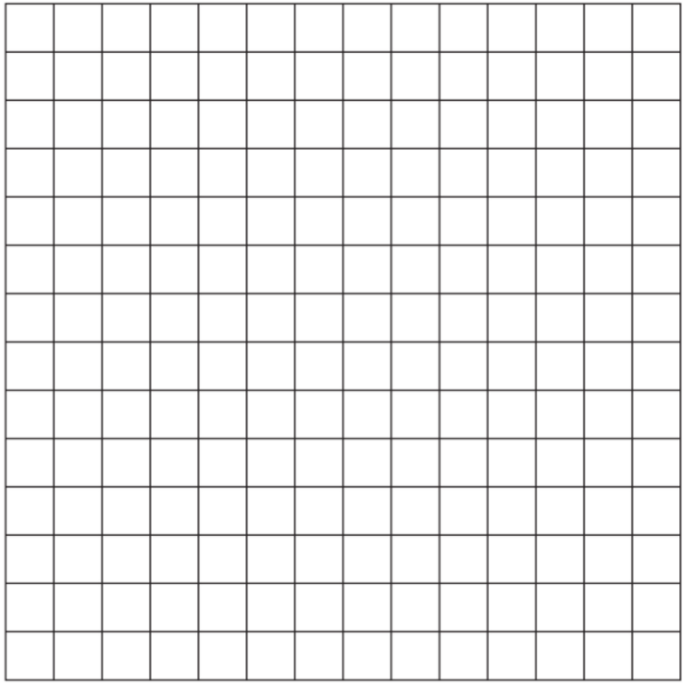
Make your own pixel design and share with someone else to find the lowest score possible.



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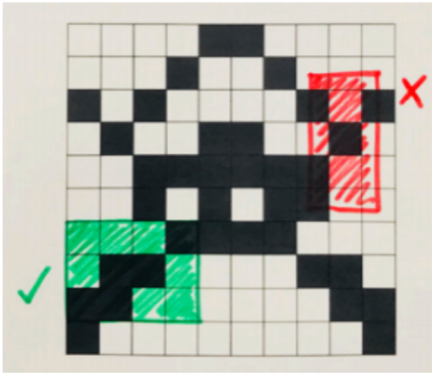
Play Hide the Pixels. What's the lowest score?

Cover all of the colored pixels using rectangles. Your rectangles may cover black and white squares.



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△ + ○ = ▭

Your Score

Try to get the lowest score possible!

Discussion: Using other pixel art

What new learning did you have?

What was useful at organizing your data?

Number of Rectangles Used	Square of Number of Rectangles Used	Area of Rectangles	Score

x	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Mindset Video

Please watch this video:https://www.youcubed.org/wim/brains-grow-and-change/

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Debrief

With the whole class, ask how you were able to practice the “brains grow and change” from the video we watched.

What did students like about this activity?

What parts were challenging?

How did they grow their brain during this activity?