



# Lesson 1 | Warmup

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This is a Pixel Bots exercise. In Pixel Bots we will program bots to paint pictures using Code Elements.

## Code Elements

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## Problem 1

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Pixel Bot Read Code: You are a pixel bot. Read the code and paint the picture.





# Lesson 1 | Worksheet 1

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This is a Pixel Bots exercise. In Pixel Bots we program bots to paint pictures using Code Elements.

## Code Elements

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## Example

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## Problems

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You are a pixel bot. Read the code and paint the picture.





# Lesson 1 | Worksheet 1 (cont'd)



1	↓
2	↖
3	←
4	↗



1	↖
2	←
3	↖
4	↓
5	↗



1	↖
2	↑
3	↖
4	↑
5	↖





## Lesson 2 | Warmup

This is a Pixel Bots exercise. In Pixel Bots we program bots to paint pictures using Code Elements.

### Code Elements



### Example



1	→
2	🖍
3	↑
4	↑
5	🖍

### Problems

You are a pixel bot. Read the code and paint the picture.



1	↑
2	→
3	🖍
4	↑
5	→
6	🖍
7	↓
8	↓
9	🖍





# Lesson 2 | Worksheet 1

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This is a Pixel Bots exercise. In Pixel Bots we program bots to paint pictures using Code Elements.

## Code Elements

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## Problem

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You are a coder. Write code to command the pixel bot to paint the picture.



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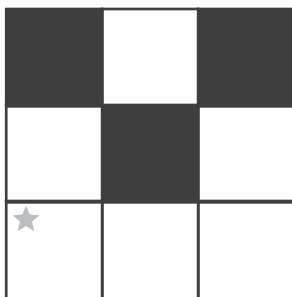


# Lesson 4 | Worksheet 1

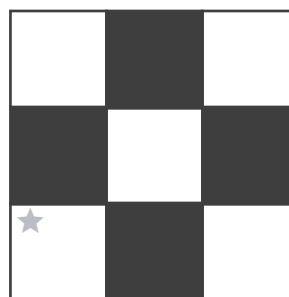
This is an online Pixel Bots exercise. In Pixel Bots we program bots to paint pictures using Code Elements.

## Problems

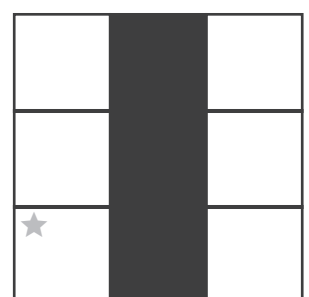
You are a coder. Write code to command the pixel bot to paint the pictures.



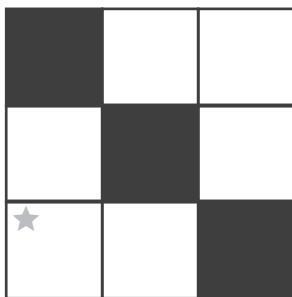
- ☐ done
- ☐ explained



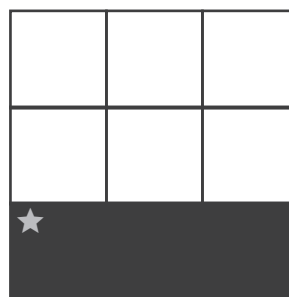
- ☐ done
- ☐ explained



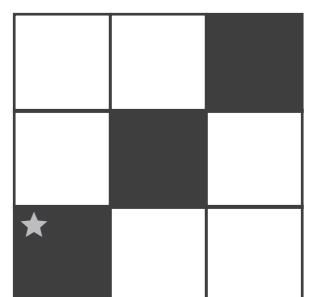
- ☐ done
- ☐ explained



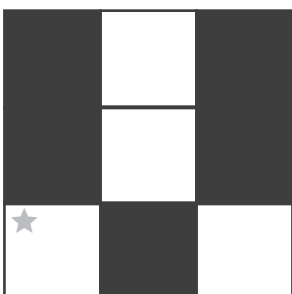
- ☐ done
- ☐ explained



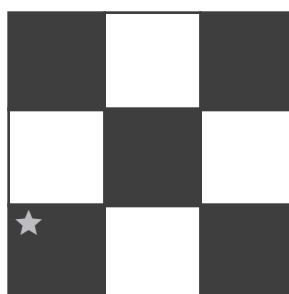
- ☐ done
- ☐ explained



- ☐ done
- ☐ explained



- ☐ done
- ☐ explained



- ☐ done
- ☐ explained





# Lesson 4 | Exit Ticket

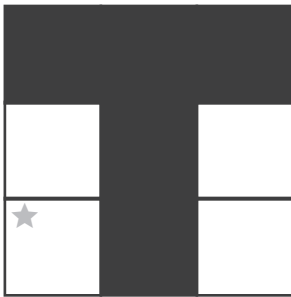
This is a Pixel Bots exercise. In Pixel Bots we program bots to paint pictures using Code Elements.

## Code Elements



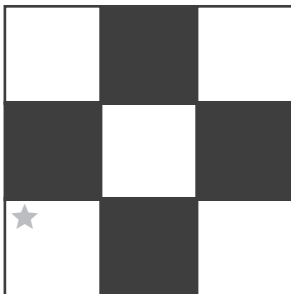
## Problem

You are a coder. Write code to command the pixel bot to paint the picture.



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12






# Lesson 6 | Warmup

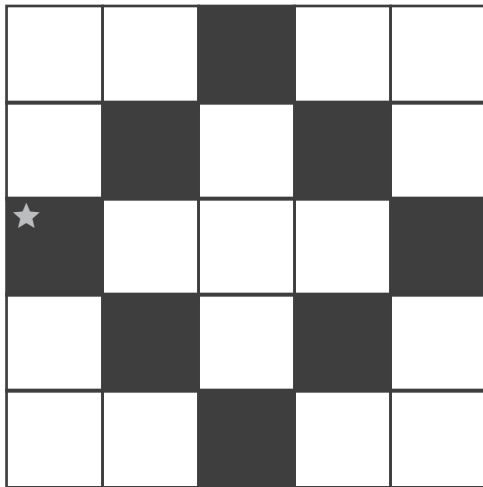
This is a Pixel Bots exercise. In Pixel Bots we program bots to paint pictures using Code Elements.

## Code Elements



## Problem

You are a coder. Write code to command the pixel bot to paint the picture.



1		16	
2		17	
3		18	
4		19	
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13		28	
14		29	
15		30	







# Lesson 6 | Worksheet 1

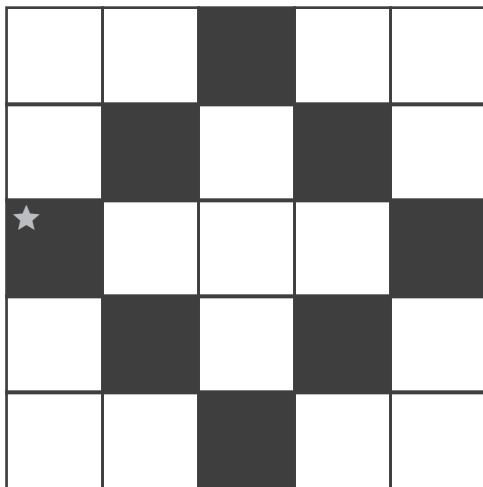
This is a Pixel Bots JavaScript exercise. In Pixel Bots we program bots to paint pictures using Code Elements.

## Code Elements

up()                      down()  
left()                    right()  
paint()

## Problem

You are a coder. Write code to command the pixel bot to paint the picture.



1  
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# Lesson 6 | Worksheet 2

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This is a Dance Bot exercise. In Dance Bot we program bots to dance.

## Code Elements

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<code>up()</code>	<code>down()</code>
<code>left()</code>	<code>right()</code>
<code>spinLeft()</code>	<code>spinRight()</code>
<code>wait()</code>	

## Problem

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You are a coder. Write code to command your bot to perform the same dance your teacher is doing.

1		16	
2		17	
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14		29	
15		30	

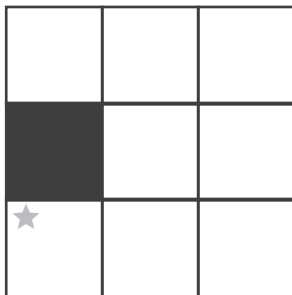


# Lesson 7 | Worksheet 1

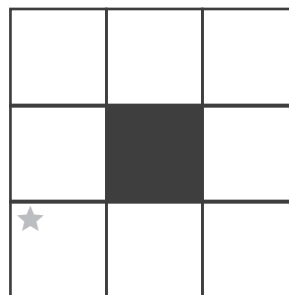
This is an online Pixel Bots exercise. In Pixel Bots we program bots to paint pictures using Code Elements.

## Problems

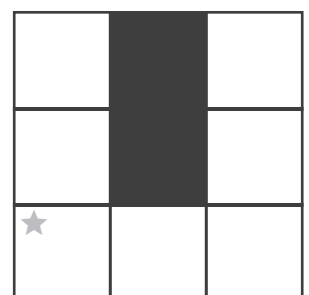
You are a coder. Write code to command the pixel bot to paint the pictures.



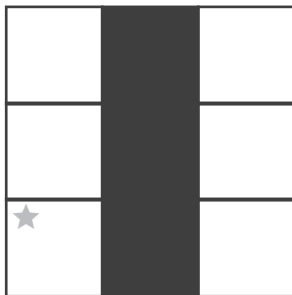
- ☐ done
- ☐ explained



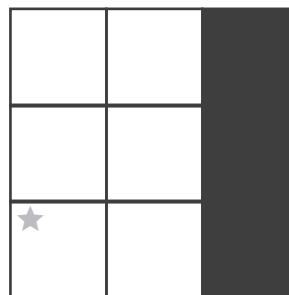
- ☐ done
- ☐ explained



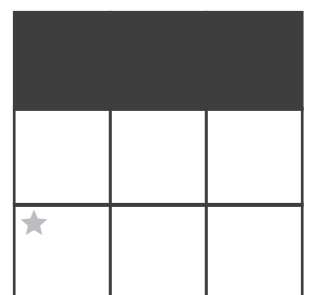
- ☐ done
- ☐ explained



- ☐ done
- ☐ explained



- ☐ done
- ☐ explained



- ☐ done
- ☐ explained



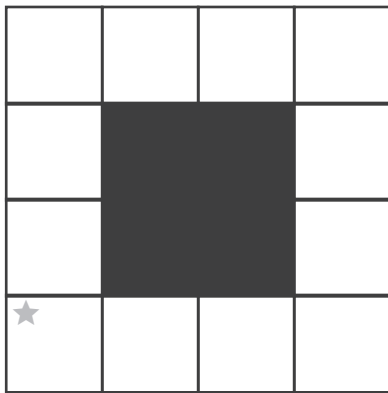


# Lesson 7 | Worksheet 2

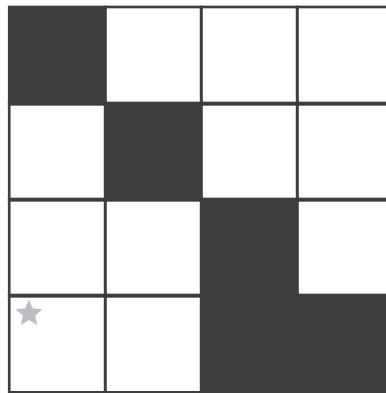
This is an online Pixel Bots exercise. In Pixel Bots we program bots to paint pictures using Code Elements.

## Problems

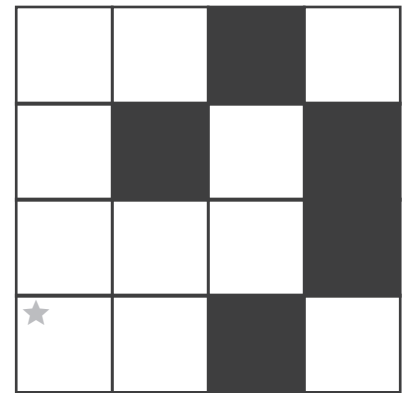
You are a coder. Write code to command the pixel bot to paint the pictures.



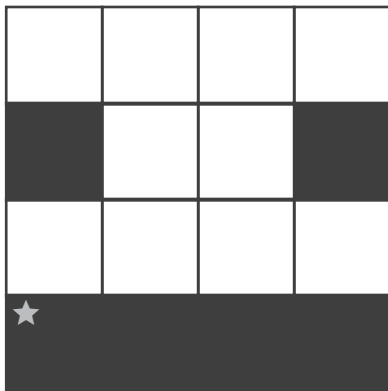
- ☐ done
- ☐ explained



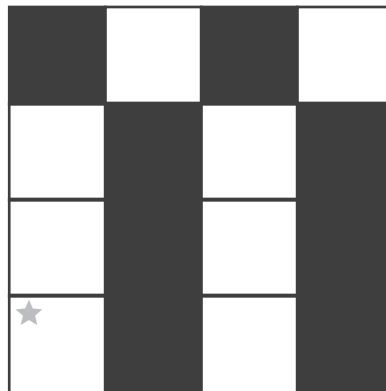
- ☐ done
- ☐ explained



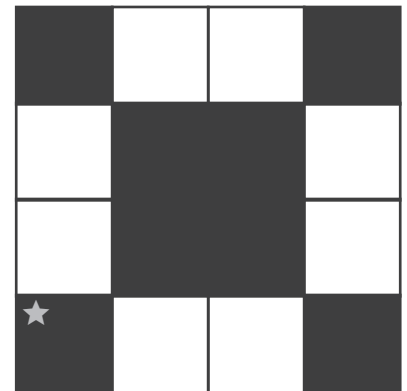
- ☐ done
- ☐ explained



- ☐ done
- ☐ explained



- ☐ done
- ☐ explained



- ☐ done
- ☐ explained





# Lesson 7 | Exit Ticket

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This is a Pixel Bots JavaScript exercise. In Pixel Bots we program bots to paint pictures using Code Elements.

## Code Elements

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up()                      down()  
left()                    right()  
paint()

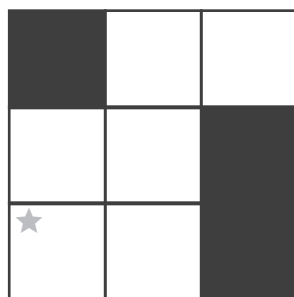
## Problems

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1) Which of the following has a syntax error:

- a. up()
- b. down()
- c. right)
- d. left()

2) You are a coder. Write code to command the pixel bot to paint the picture.



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# Lesson 8 | Warm-up

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This is a Pixel Bots JavaScript exercise. In Pixel Bots we program bots to paint pictures using Code Elements.

## Code Elements

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up()                      down()  
left()                    right()  
paint()

## Problems

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You are a coder. Write code to command the pixel bot to paint the picture.



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# Lesson 8 | Exit Ticket

This is a Mouse Bot JavaScript exercise. In Mouse Bot we program the bot to eat the cheese.

## Code Elements

faceUp()      move()  
faceRight()    getCheese()

## Problems

You are a coder. Write code to command the pixel bot to paint the picture.



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# Lesson 9 | Warm Up

This is a Mouse Bot JavaScript exercise. In Mouse Bot we program the bot to eat the cheese.

## Code Elements

faceUp()      move()  
faceRight()    getCheese()

## Problems

You are a coder. Write code to command the pixel bot to paint the picture.



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# Coders & Bots

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## Coders

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**Navigator.** You are responsible for the overall plan for the program. Guide the Writer and keep track of what your program is doing.



**Writer.** Add code to your program. Pay attention to syntax.

## Bots

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**Stepper.** Step through the program and read each step aloud. Keep your finger on the step you are reading.



**Actor.** Listen carefully to each line of code the Stepper says aloud. Using the materials available, show what each line of code does.

# { } Coding Paper

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# Coding Paper

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# Coding Paper

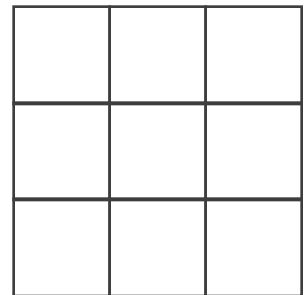
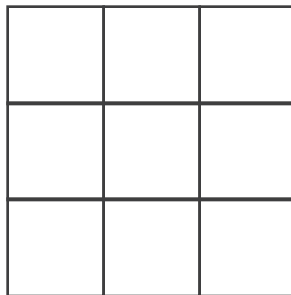
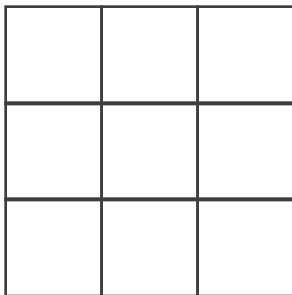
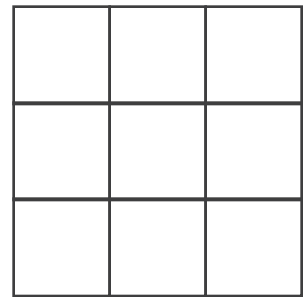
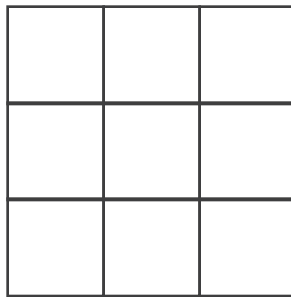
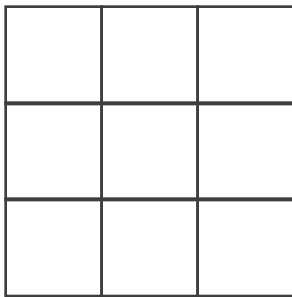
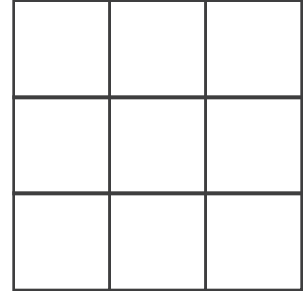
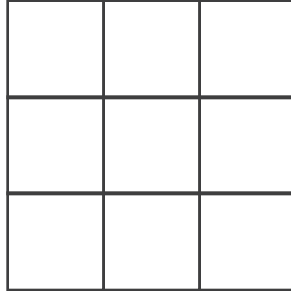
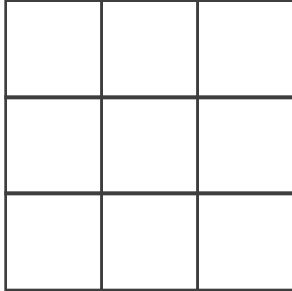
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1		31		61	
2		32		62	
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4		34		64	
5		35		65	
6		36		66	
7		37		67	
8		38		68	
9		39		69	
10		40		70	
11		41		71	
12		42		72	
13		43		73	
14		44		74	
15		45		75	
16		46		76	
17		47		77	
18		48		78	
19		49		79	
20		50		80	
21		51		81	
22		52		82	
23		53		83	
24		54		84	
25		55		85	
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27		57		87	
28		58		88	
29		59		89	
30		60		90	



# Small Pixel Grids

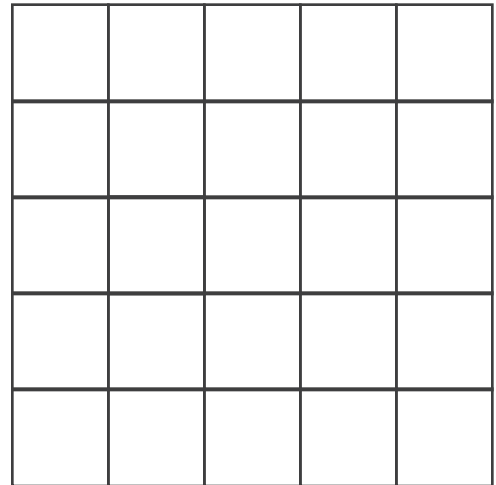
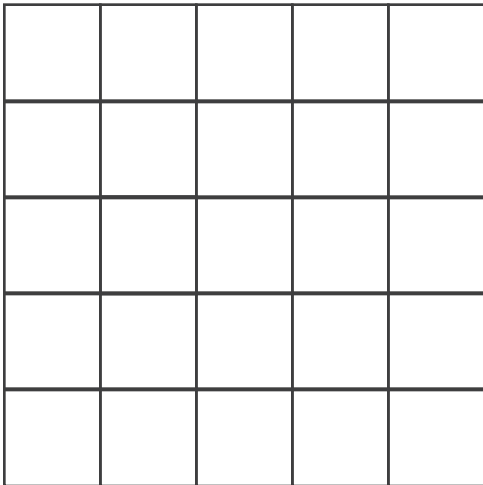
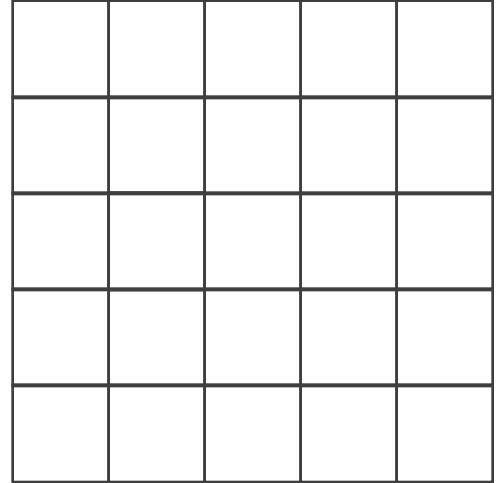
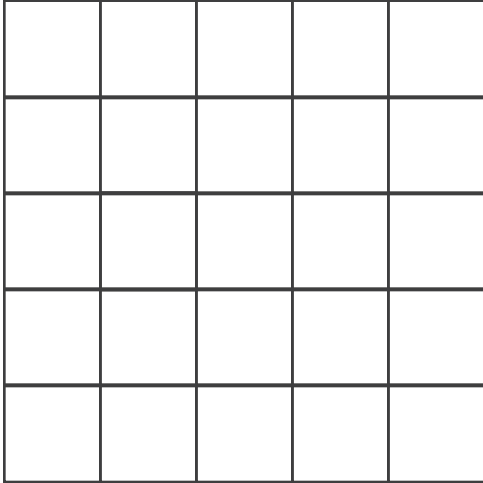
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# Medium Pixel Grids

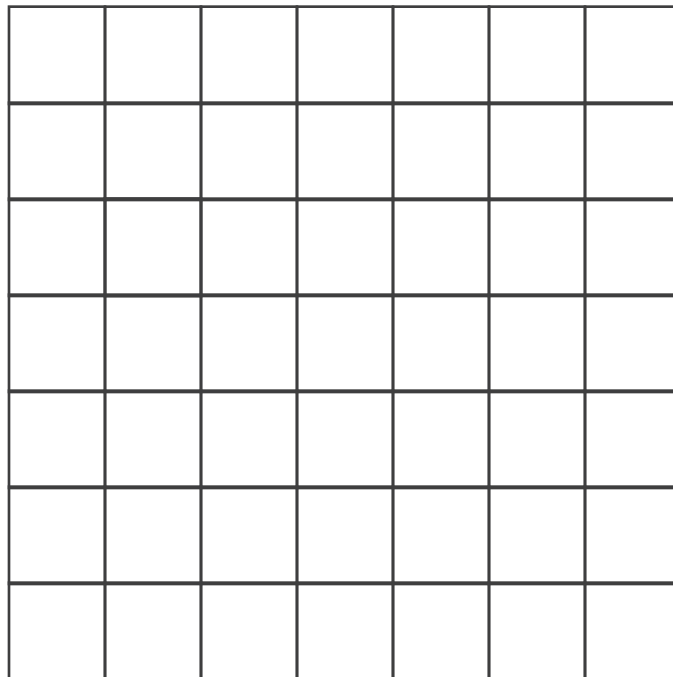
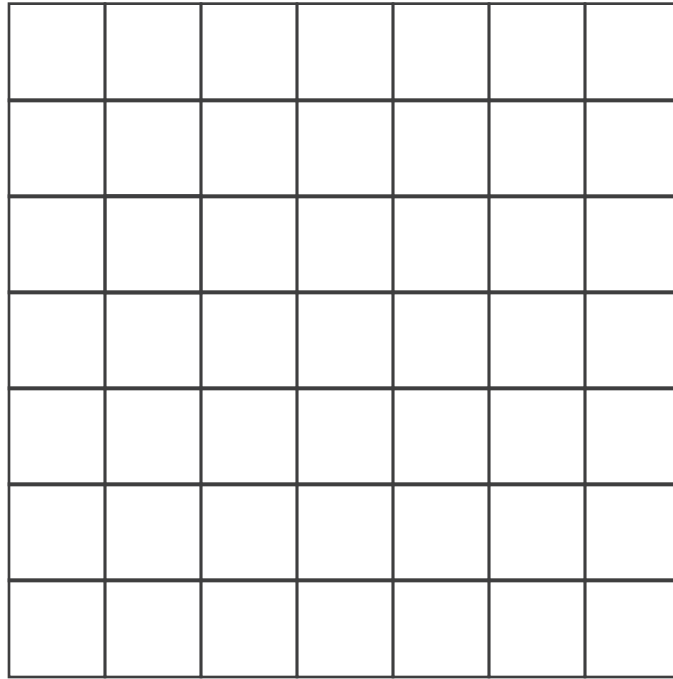
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# Large Pixel Grid

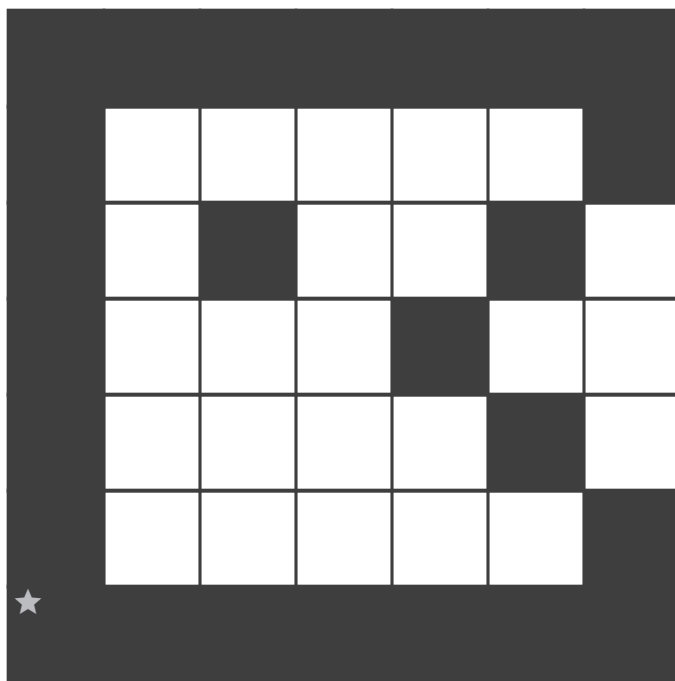
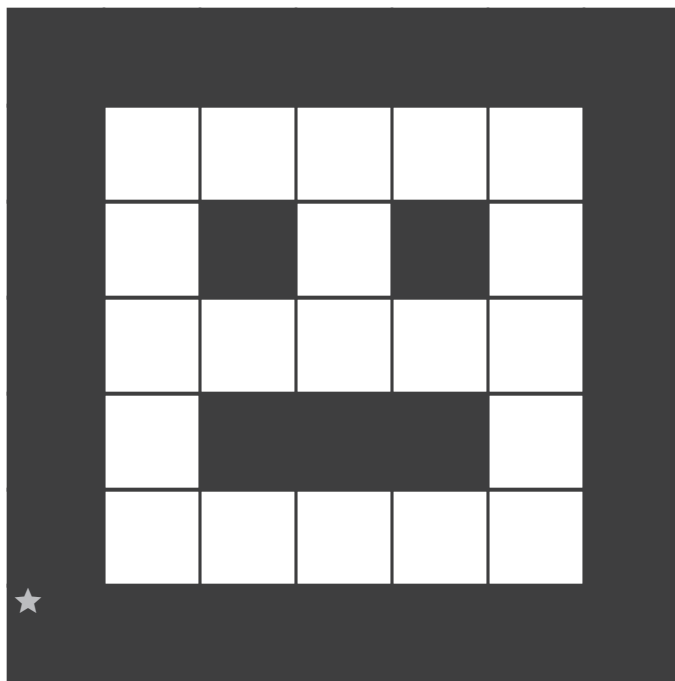
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# Challenge Problems - 1

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## Challenge Problems - 2

