



COVER UP

ACTIVITY GUIDE

BEGINNER VERSION

TABLE OF CONTENTS

Materials and Setup (p. 2)

Activity Leader Guide (p. 3-5)

Instructions (p. 6)

Tasks (p. 7-10)

Table Sign (p. 11)



**Julia Robinson
Mathematics
Festival**

Materials and Setup

Per table (assuming 5 students per table), you will need:

Per Table	Material Preparation	
75 colored square tiles	Each station needs about 15 tiles	
3 copies of Instructions	1 page each	p. 6
5 copies of Tasks	4 pages each <i>can be printed double-sided</i>	p. 7-10
1 copy of Table Sign	1 page <i>print on cardstock for sturdiness</i>	p. 11

Per Table	Purchasing Materials		
Square tiles	pack of 400 for \$28.95		
28 plastic sheet protectors	pack of 100 for \$7.67	pack of 500 for \$26.99	These are recommended in order to protect the documents that students will be handling.



What does “beginner version” mean?

This version of Cover Up was created with PreK - 2nd grade students in mind. However, “beginner” does not mean “easy,” and this version of Cover Up can be an effective way to engage students of any age who:

- Have strong math anxieties
- Don’t feel confident with math or math puzzles
- Have learning differences
- Want a gentler start to the activity

Older students and parents at our events often engage with this beginner version and move on to the [regular version](#) when they feel ready.

Objective

Cover up some of the squares so that there is the right number of stars in each row and column.

1. The right number is listed at the top of the page.
2. You can cover up more than one square.

Materials

Each Cover Up table should be prepped for 5 stations.

Each station needs:

1. 10 colored square tiles.
2. Cover Up instructions.
3. Cover Up tasks.

How to Play

Introduce the activity without overexplaining it and without telling what strategies students might want to use. As much as possible, avoid giving away answers. Students should be encouraged to explore, experiment, and learn from their mistakes.

1. Demonstrate the rules by starting the first puzzle with them.
2. Have the student help you place the first few squares. Reinforce that the number of stars in the squares must equal the number indicated at the top of the page.
3. Have the student solve the first puzzle and then explore the next puzzles.

Standards

1. Make sense of problems and persevere in solving them. CCSS.MP1
2. Construct viable arguments and critique the reasoning of others. CCSS.MP3
3. Model with mathematics. CCSS.MP4
4. Look for and make use of structure. CCSS.MP7

Asking Good Questions

1. Ask questions about confidence.
 - a. When a student asks you “Is this right?”, instead of saying “yes” or “no” right away, ask them how confident they are in their answer. Here are some examples:
 - i. “Maybe. What do you think? How confident are you?”
 - ii. “On a scale of 1-5, how confident are you in your answer?”
 - b. If a student is not confident in their answer, follow up by asking “What would help you feel more confident in your answer?” or “Why do you not feel confident?” This helps you determine how best to help the student through their explorations.
2. Ask students about choices.
 - a. When a student is stuck or shows you a wrong answer, instead of jumping in and showing the student the correct answer, start by asking about the choices that the student made along the way. Here are some suggested steps to follow:
 - i. Start from the beginning.
 - ii. Ask students to show you what they’ve tried so far.
 - iii. When the student gets to a point where they have different choices, ask the student “What other choices can you make here?”
 - iv. Have the student make a different choice and try to solve the puzzle. This helps the student see that they have the power to make different choices during an activity, and they’ll start to do this on their own in the future.
 - v. If you’re familiar with the puzzle or a particular solution, stop the student only when a different choice will help them get to the solution. This will help them feel successful faster without you giving away too much of the answer.
3. Ask students about strategies.
 - a. If a student is getting into the activity and has been doing it for a while, ask the student if there are any strategies they’ve come up with to help them solve the puzzle or win the game.
 - b. Follow up by asking if they think their strategies will work for all puzzles and/or larger puzzles, more complex puzzles, etc. Have the student explore more complex puzzles to test out their strategies.
 - c. This is a great way to encourage a student to dive deeper into an activity and to start looking for patterns, structure, and proofs.

Answers

Some puzzles have more than one solution, so answers may vary.

Puzzle 1



Puzzle 2



Puzzle 3



Puzzle 4



Puzzle 5



Puzzle 6



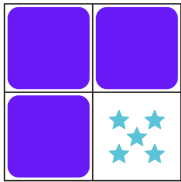
Puzzle 7



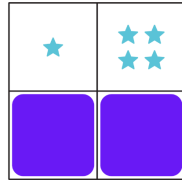
Puzzle 8



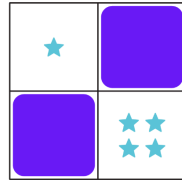
Puzzle 9



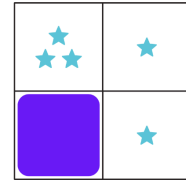
Puzzle 10



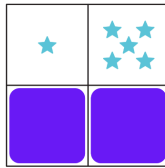
Puzzle 11



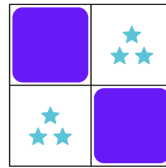
Puzzle 12



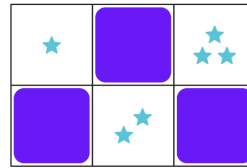
Puzzle 13



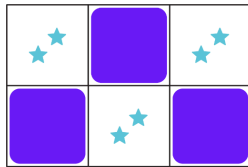
Puzzle 14



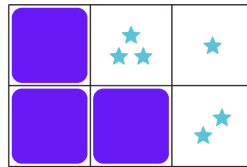
Puzzle 15



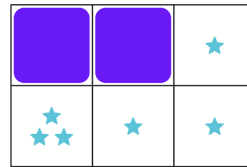
Puzzle 16



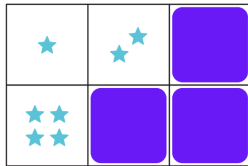
Puzzle 17



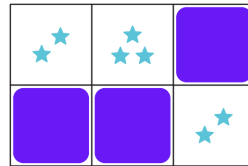
Puzzle 18



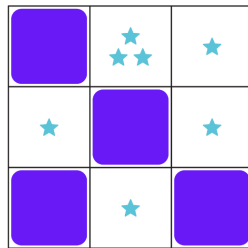
Puzzle 19



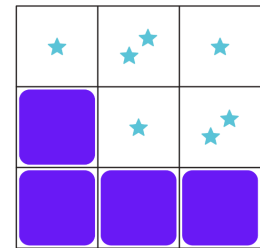
Puzzle 20



Puzzle 21



Puzzle 22

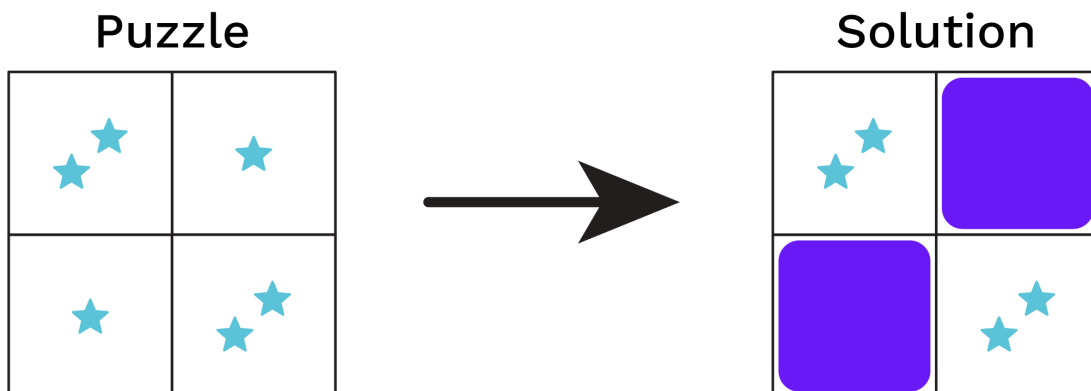


Cover Up Instructions (Beginner)

Rules:

- Cover up squares so that there is the right number of stars in each puzzle.
- The right number is listed at the top of the page.
- You can cover up more than one square.

4 Stars



Cover Up (Beginner)



BEGINNER

4 Stars

Puzzle 1



Puzzle 2



Puzzle 3



Puzzle 4



Puzzle 5



Puzzle 6



Cover Up (Beginner)



5 Stars

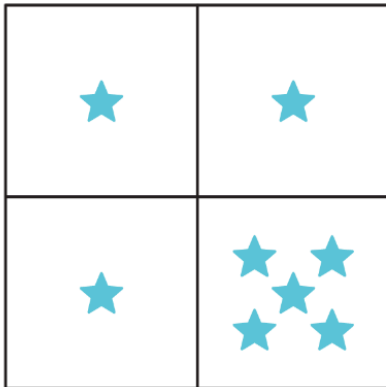
Puzzle 7



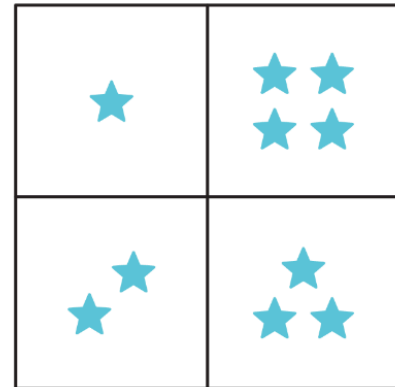
Puzzle 8



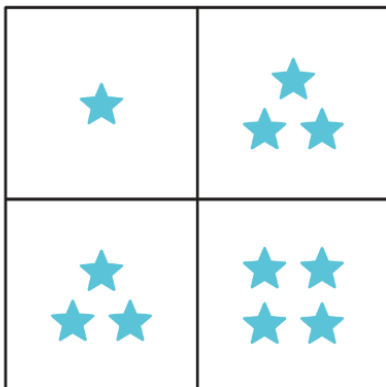
Puzzle 9



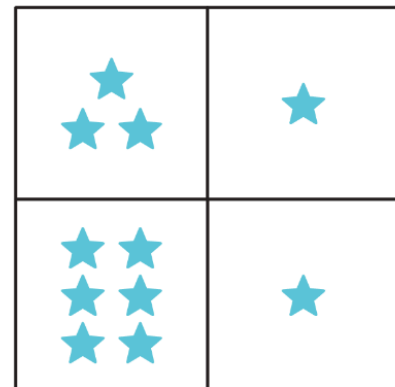
Puzzle 10



Puzzle 11



Puzzle 12



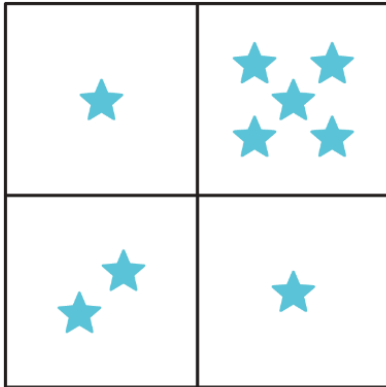
Cover Up (Beginner)



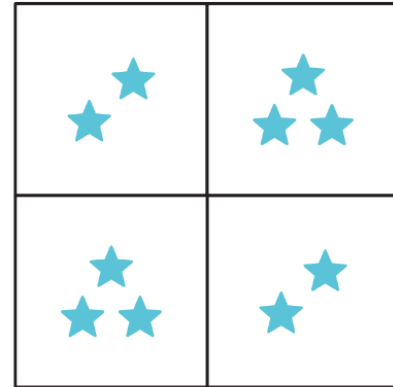
BEGINNER

6 Stars

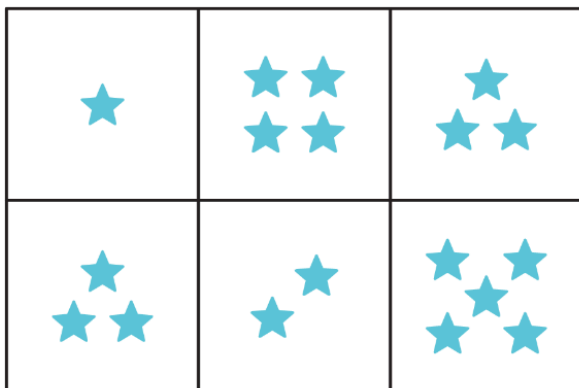
Puzzle 13



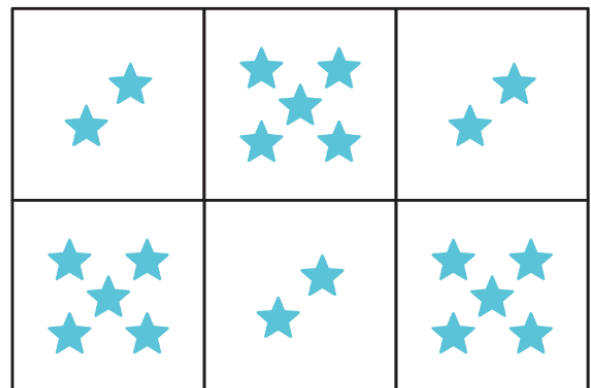
Puzzle 14



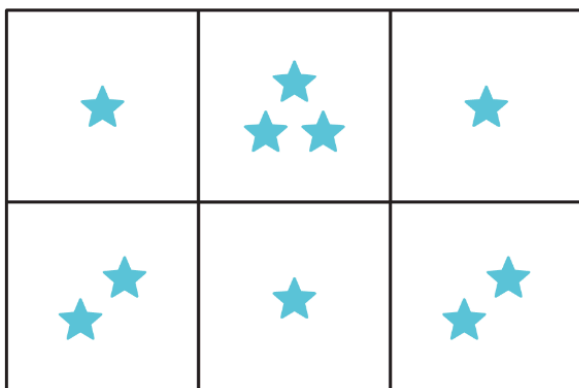
Puzzle 15



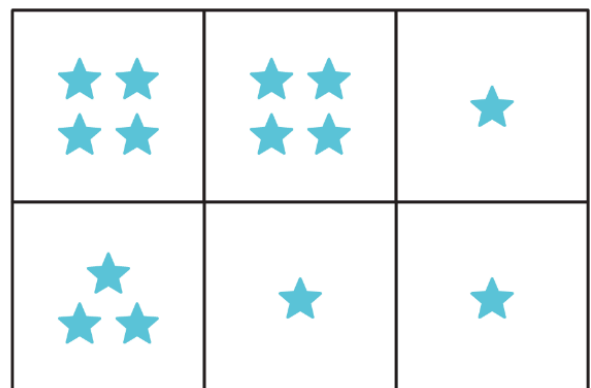
Puzzle 16



Puzzle 17



Puzzle 18

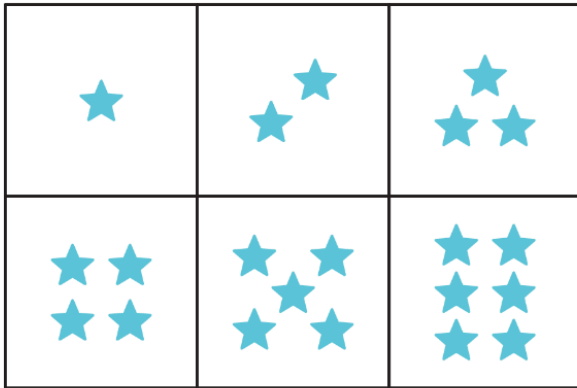


Cover Up (Beginner)

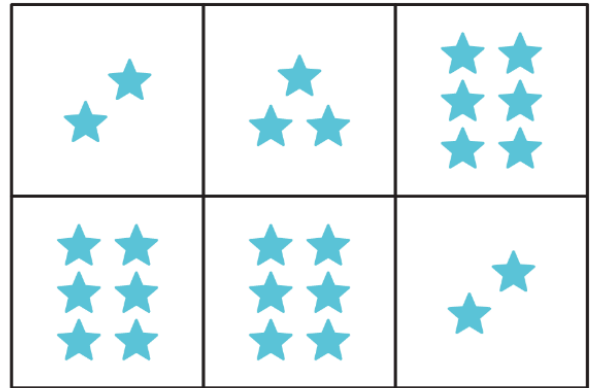
7 Stars



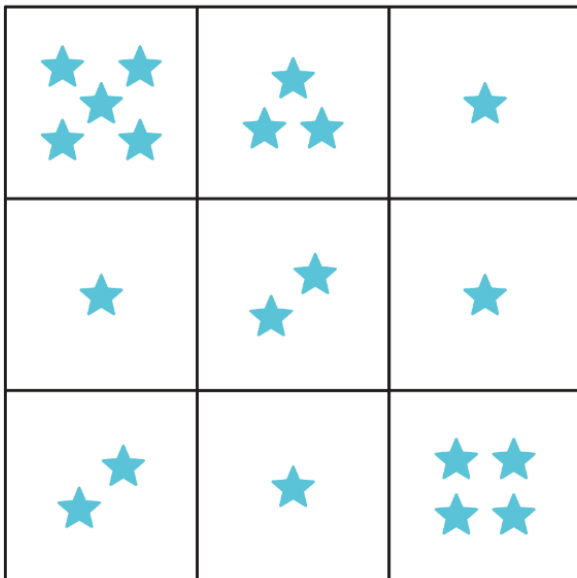
Puzzle 19



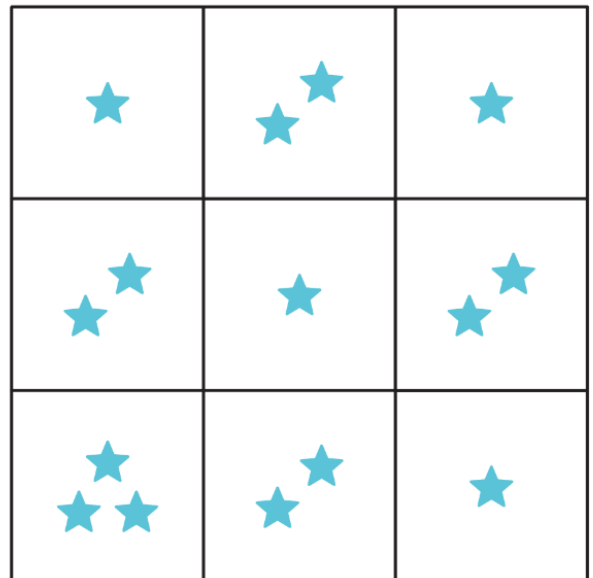
Puzzle 20



Puzzle 21

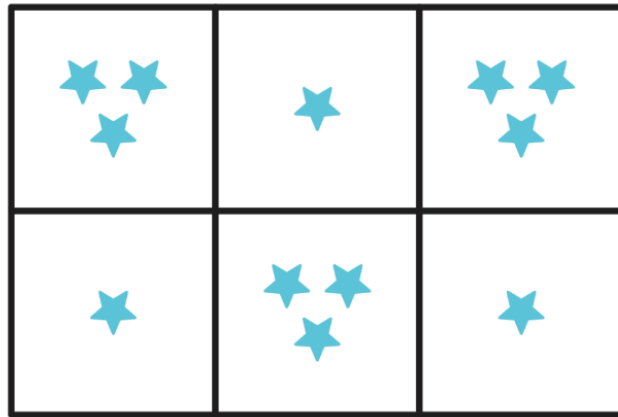


Puzzle 22





Play for free at
jrmf.org/puzzle/cover-up

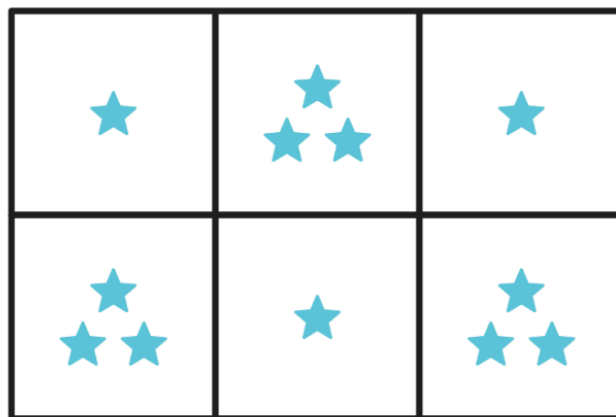


COVER UP

BEGINNER



COVER UP



Play for free at
jrmf.org/puzzle/cover-up



BEGINNER