

CONTENTS

- p. 3-4: Teacher Instructions
- p. 5: Coding Apps and Websites Poster
- p. 6: What is Coding? Poster
- p. 7: Flow Control Structures Poster
- p. 8-9: Names for a Number posters
- p. 10: START mat
- p. II: STOP mat
- p. 12: Sequencing Arrow mat
- p. 13-25: +0 mats
- p. 26-38: +1 mats
- p. 39-51: +2 mats
- p. 52-64: +3 mats
- p. 65-77: +4 mats
- p. 78-90: +5 mats
- p. 91-103: +6 mats
- p. 104-116: +7 mats
- p. 117-129: +8 mats
- p. 130-142: +9 mats
- p. 143-155: +10 mats
- p. 156-168: •II mats
- p. 169-181: +12 mats

- p. 182-194: -0 mats
- p. 195-206: -1 mats
- p. 207-217: -2 mats
- p. 218-227: -3 mats
- p. 228-236: -4 mats
- p. 237-244: -5 mats
- p. 245-25l: -6 mats
- p. 252-257: -7 mats
- p. 258-262: -8 mats
- p. 263-266: -9 mats
- p. 267-269: -10 mats
- p. 270-271: -II mats
- p. 272: -12 mat
- p. 273-284: Looping mats (Names for a
- Number)
- p. 285-286: Coding Board Game
- instructions and game pieces
- p. 287-299: ADDITION Coding Board
- **Game Pieces**
- p. 300-308: SUBTRACTION Coding Board
- **Game Pieces**
- **p. 309-320 ANSWER KEYS**
- p. 32l: Credits

TEACHER INSTRUCTIONS

Basic Facts Hop Scotch Coding provides a simple, interactive introduction to block-style coding that is perfect for Kindergarten through third graders as they learn the basics of programming and practice basic addition and subtraction facts. After completing activities such as these, they can apply similar block coding strategies to coding websites and apps for kids and eventually to more advanced languages of coding. To allow students to be most successful, please MODEL and clearly discuss directions for this activity before they complete it with groups.

OPTION I: HOP SCOTCH CODING

To prep the Basic Facts Hop Scotch Coding mats, copy one set of the basic set mats for EACH GROUP of 3-4 students. If using in a math center, copy only one set. You may choose to copy on a different colored paper for each set OR color code the pieces by the type of code similar to the photo shown on the following page.

-I START Mat (p. 10)
-I STOP Mat (p. 11)
-4-6 Sequencing Arrows (p. 12)
-I set of Basic Facts Mats
-3 different Looping Mats (p. 273-p. 284)

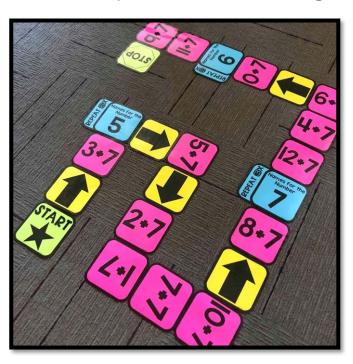
For durability and long-term use, you will need to LAMINATE the mats because students will be stepping on them.

OPTION 2: BOARD GAME CODING

For another option, smaller, board game style pieces and game pieces are also included beginning on page 285. One set can be copied for each pair of students. They can build the code on a tabletop or floor space as they practice basic facts

HOP SCOTCH CODING INSTRUCTIONS

In groups of 3-4, students will build a sequence of code on the floor together. Each student will then take turns walking through the sequence of code and answering the basic facts all the way from START to STOP. They may carry a dry erase board (mat provided on page 9) and marker with them so they may draw pictures and basic fact strategies as needed. A sequencing arrow means to advance in that direction. On each basic fact (condition), the student will state the sum or difference out loud and the group will agree or coach the student as needed. ANSWER KEYS are provided on pages 309-320 for the students to check answers. A looping mat signals that students will repeat the action a given number of times, and will write that many "names" for a certain number. Examples of Names for a Number are shown on page 8. See pages 6-7 to use with your students as you introduce coding vocabulary and the coding concepts in the game.

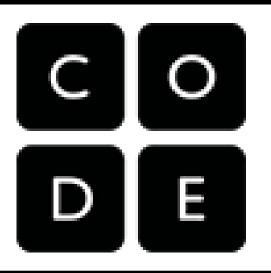


CODIN9 APPS & WEBSITES

KODABLE BOX ISLAND CODE.ORG







SCRATCH JR.

BEEBOL

SWIFT PLAYGROUNDS







WHAT IS CODIN9?

coding is the way we tell computers to do all the helpful things that they do for us. coding is what makes it possible for us to create computer software, apps, and websites.



computers
follow a list of
instructions
that a coder, or
programmer,
has written.

FLOW CONTROL STRUCTURES

SEQUENCE CONDITION

LOOP



the order of commands



if, then commands (answer the fact)



commands that are repealed

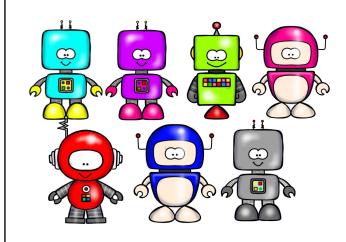
NAMES FOR A NUMBER

Word

Picture

Ten Frame

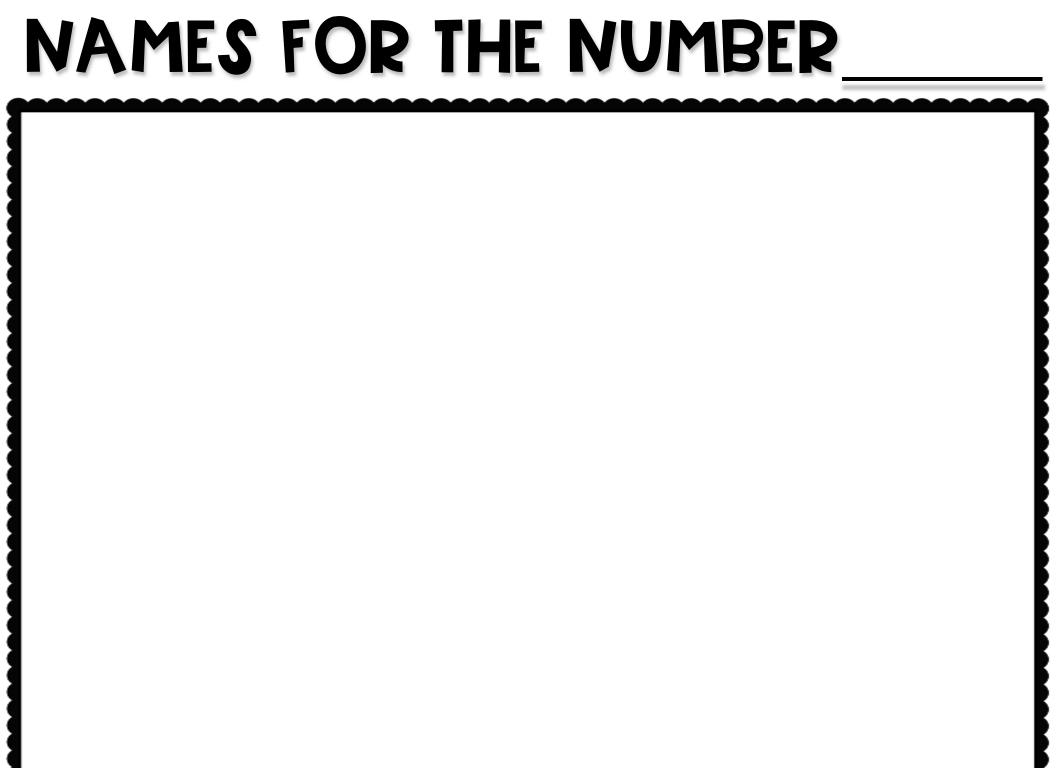
seven



Addition Subtraction Number Model Number Model

Tally Marks

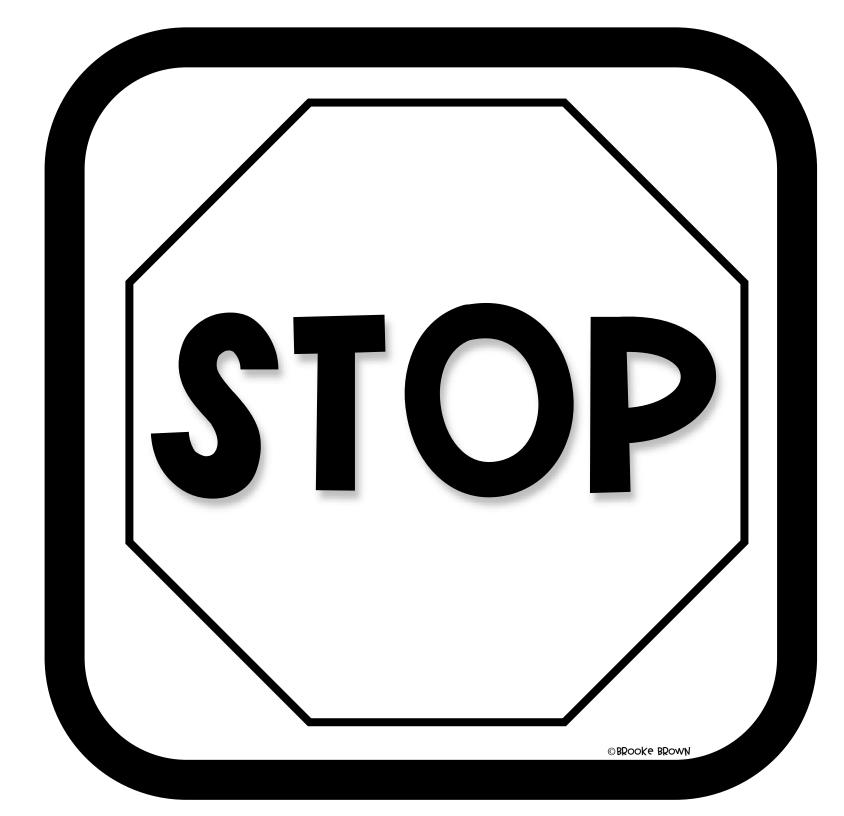
3 + 4 = 7 10 - 3 = 7 11 11



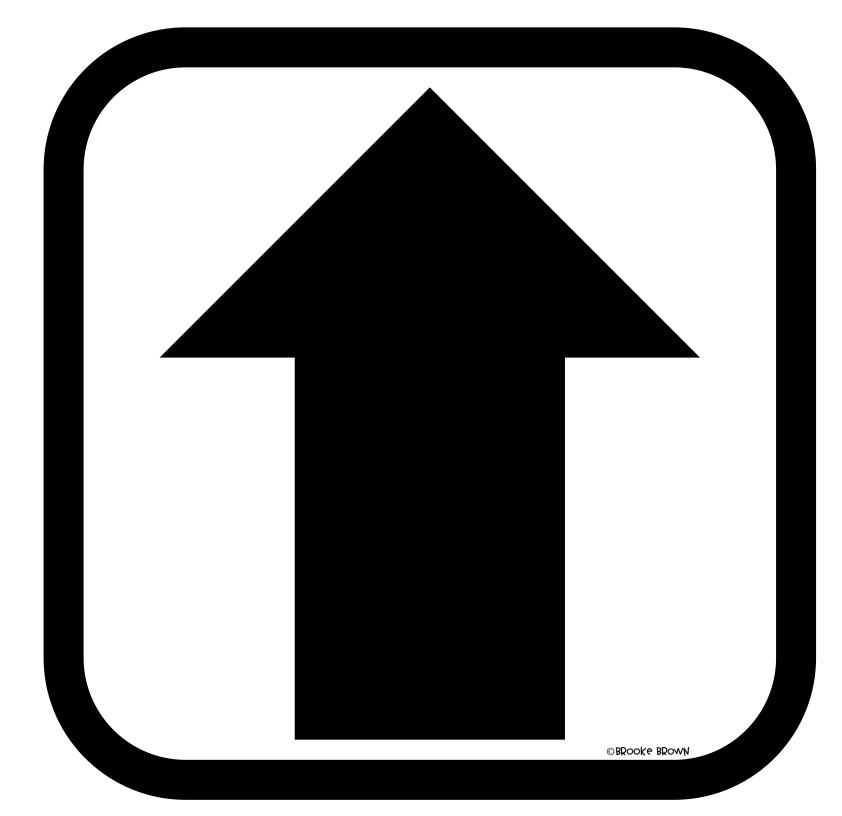
I Copy per słudenł group



I Copy per słudenł group



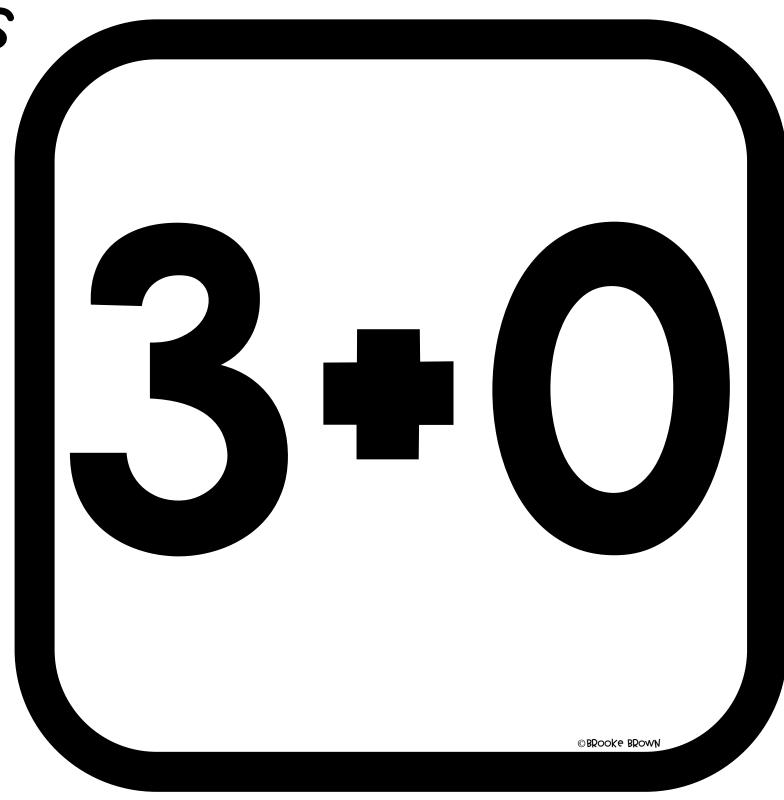
4-6 Copies per słudenł group



+O tacts ©BRooke BROWN

©BRooke BROWN

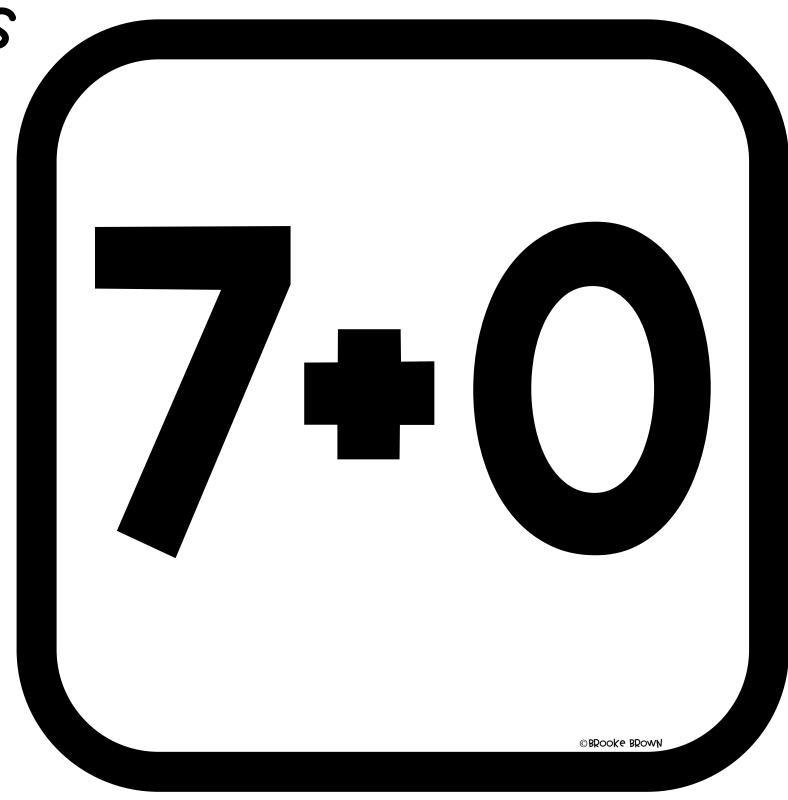




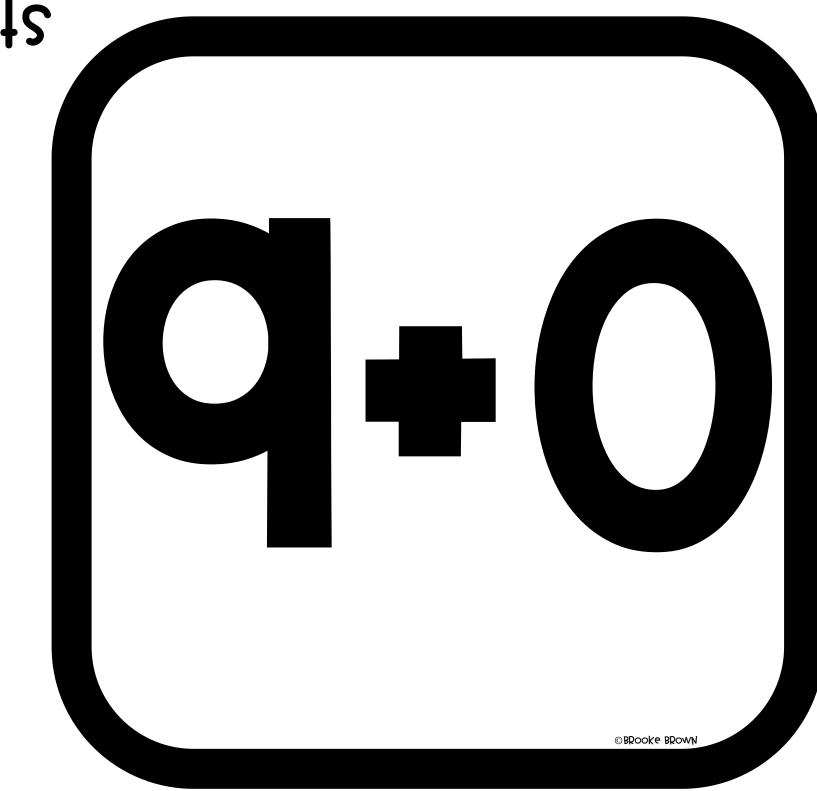
©BRooke BROWN

©BRooke BROWN

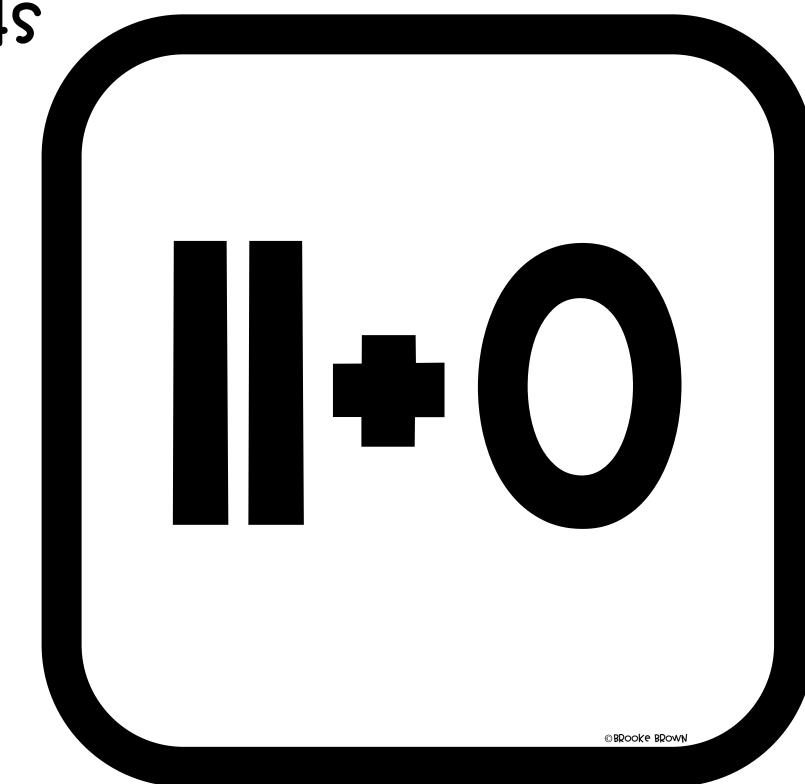
+O tacts ©BRooke BROWN



+O tacts ©BRooke BROWN

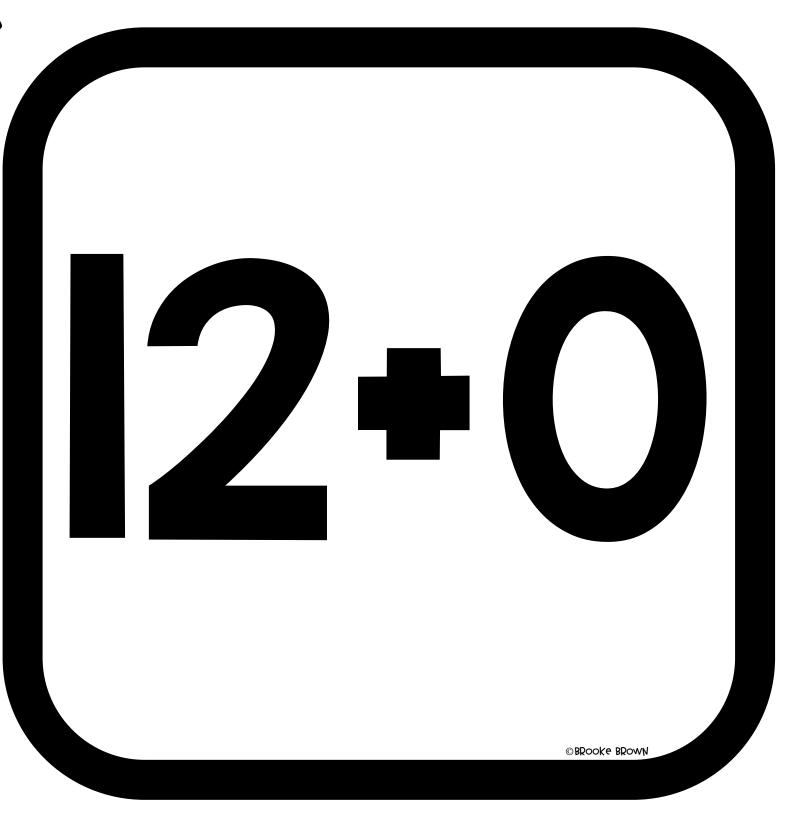


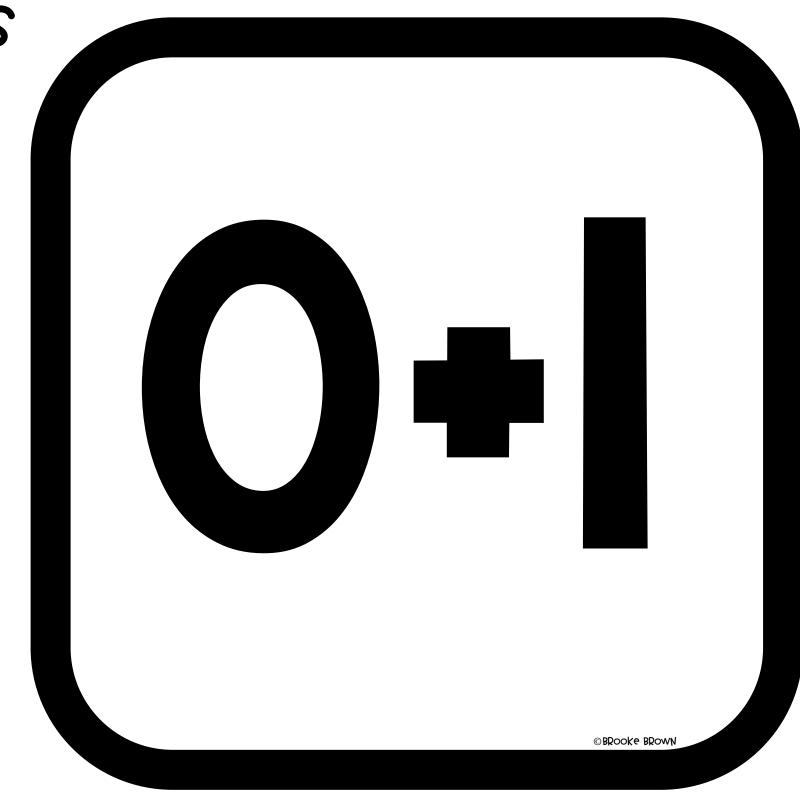
©BRooke BROWN



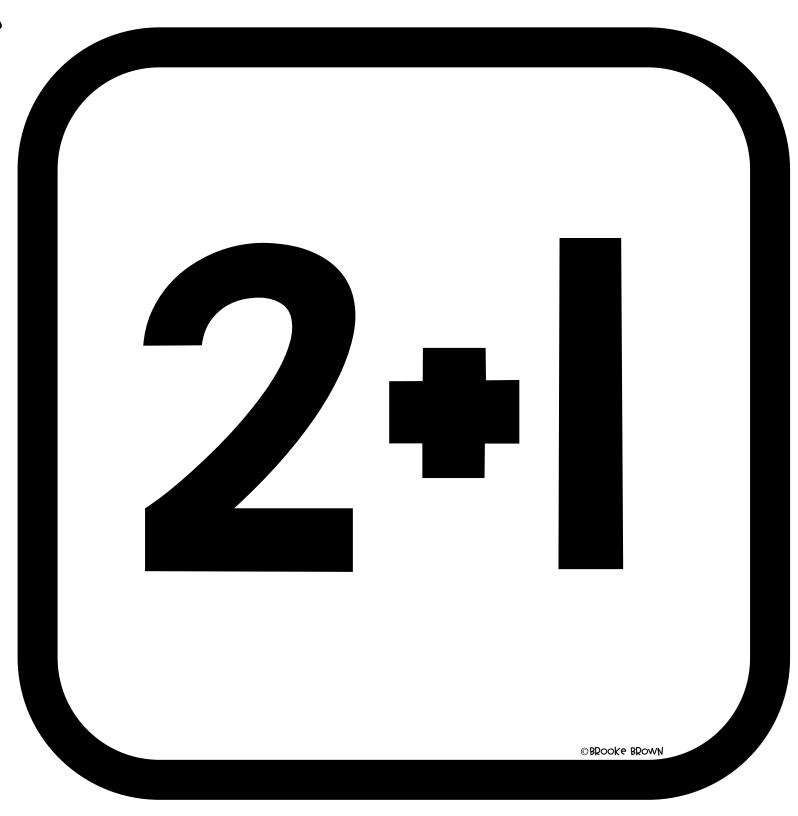
+0 tacts

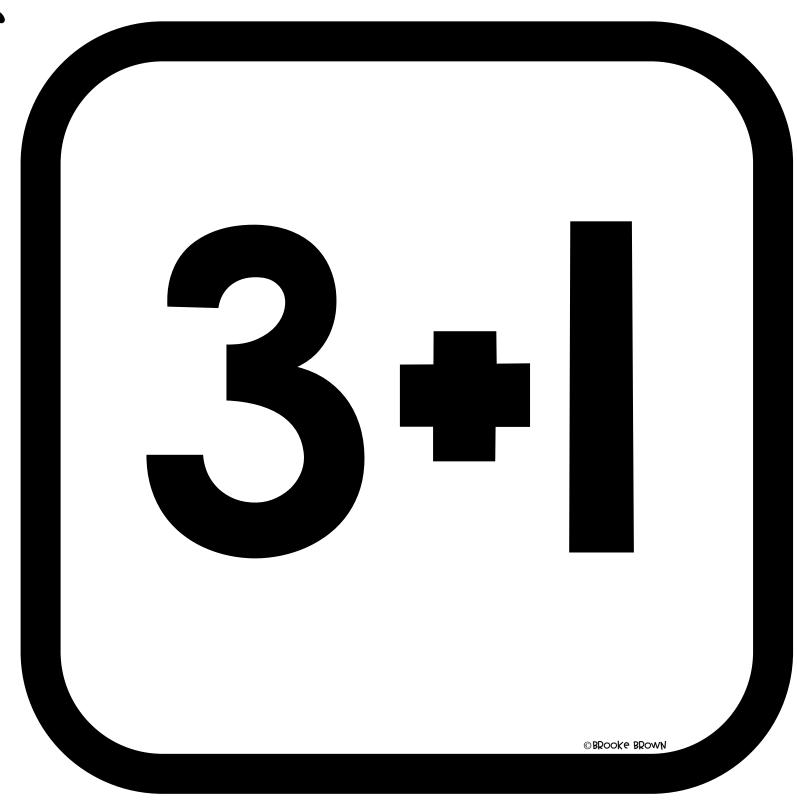
+0 tacts



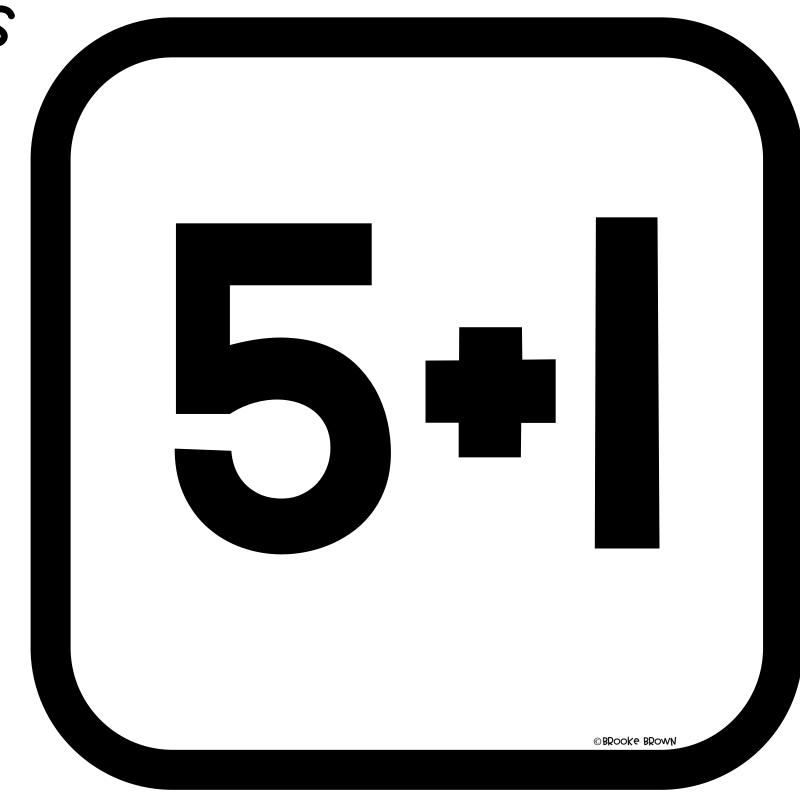


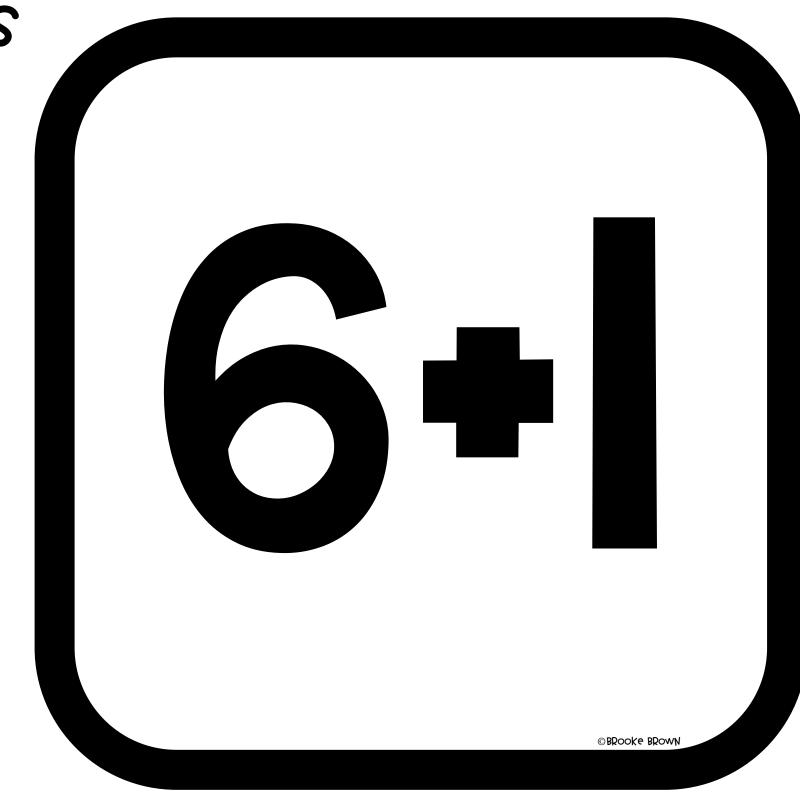
©BRooke BROWN



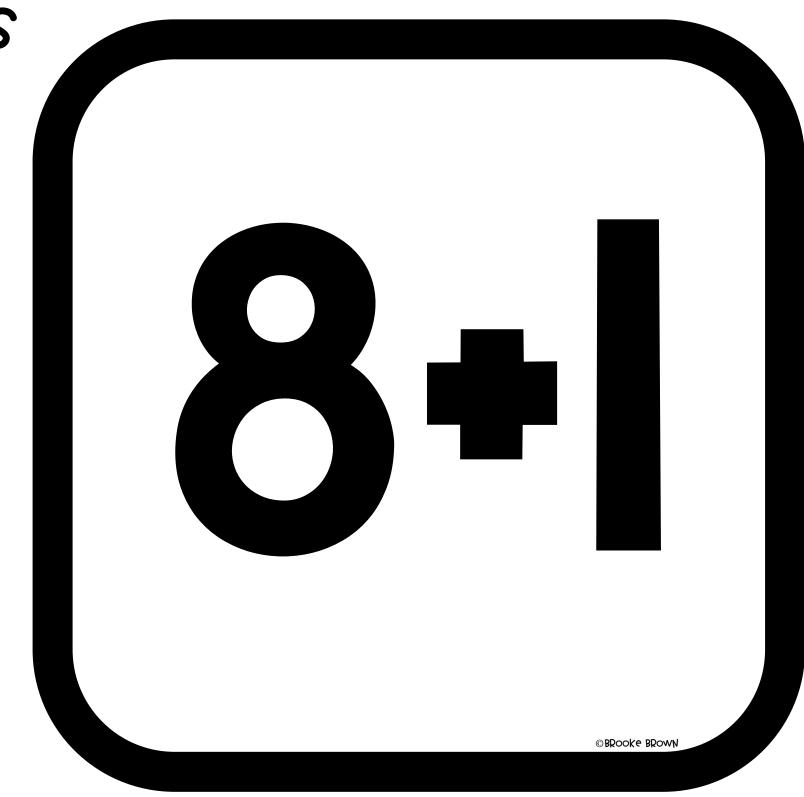


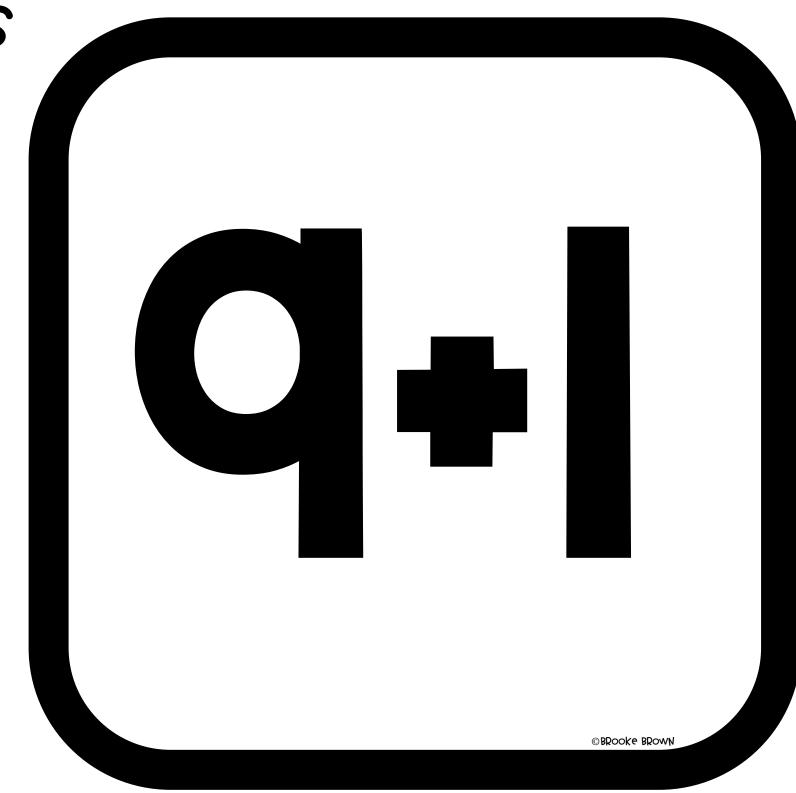
©BRooke BROWN

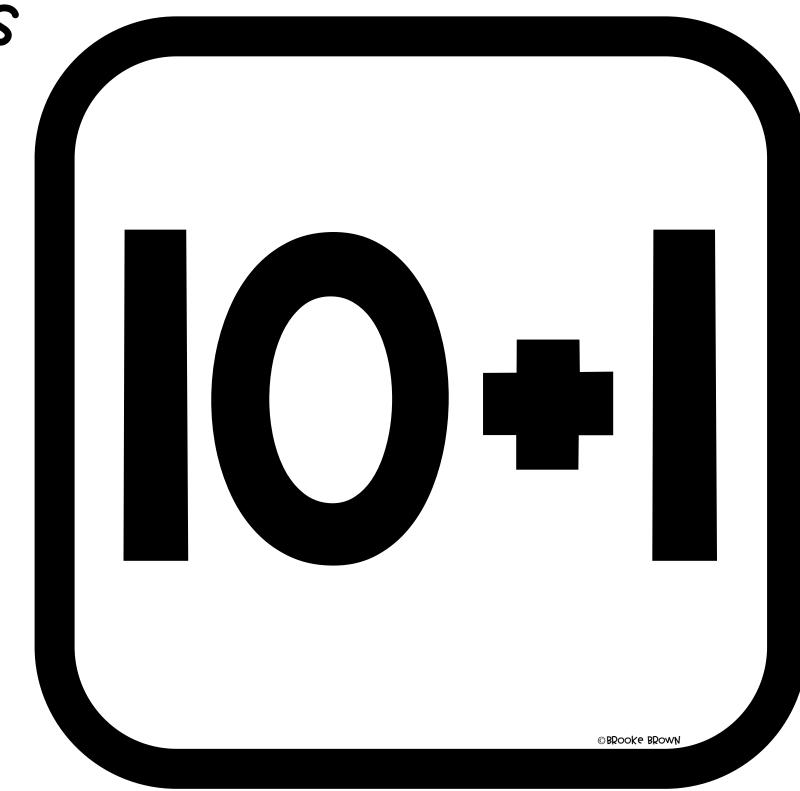




+I tacts ©BRooke BROWN



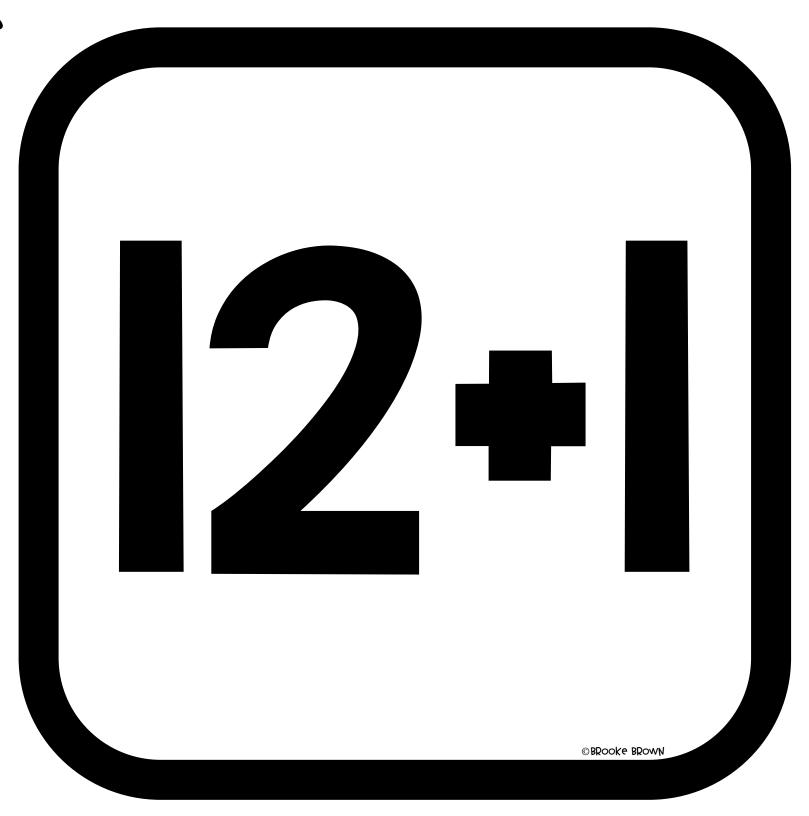


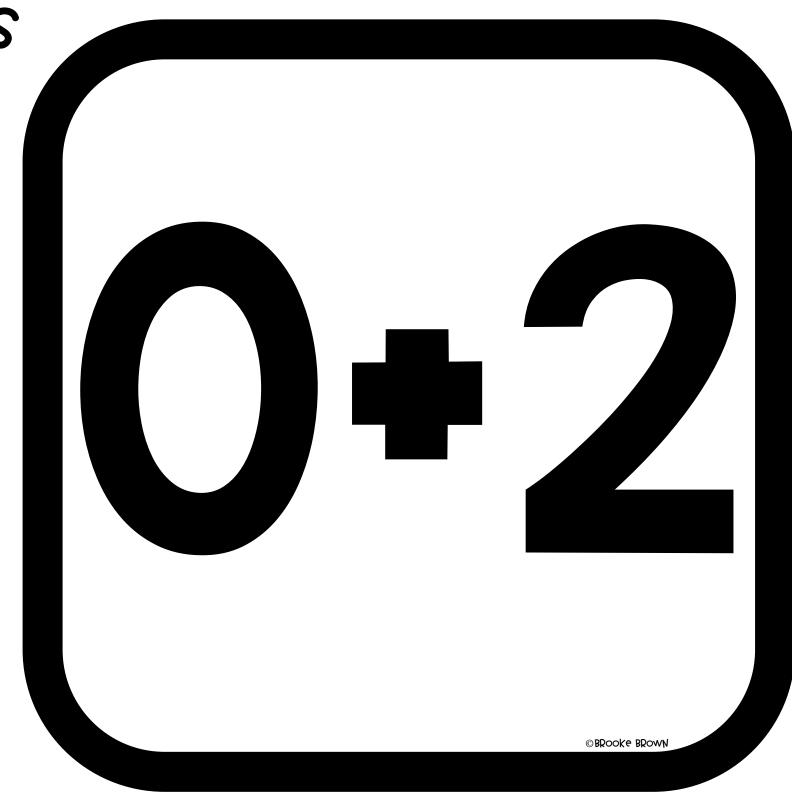


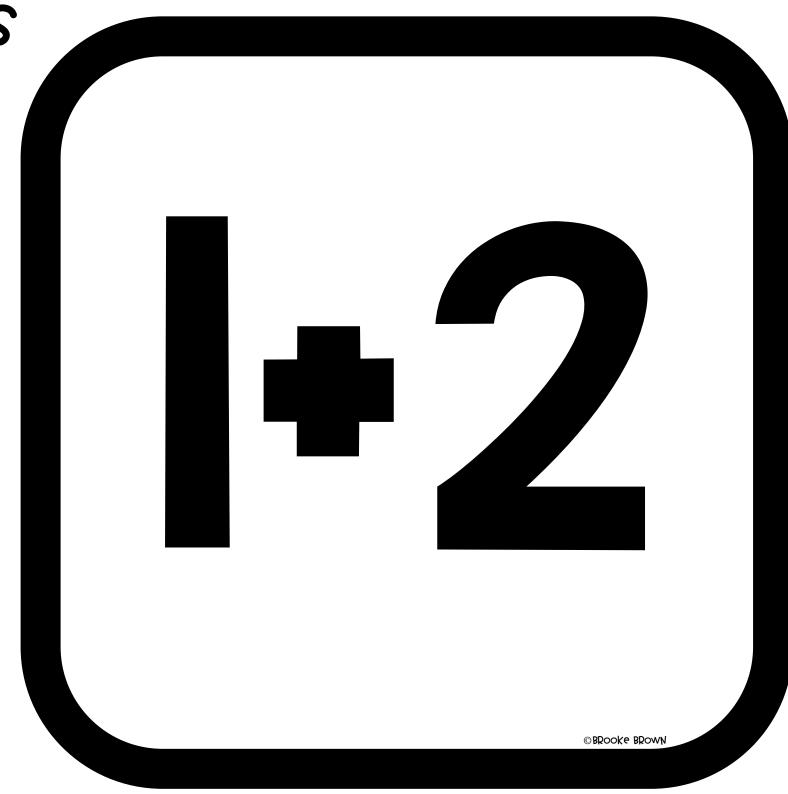
©BRooke BROWN

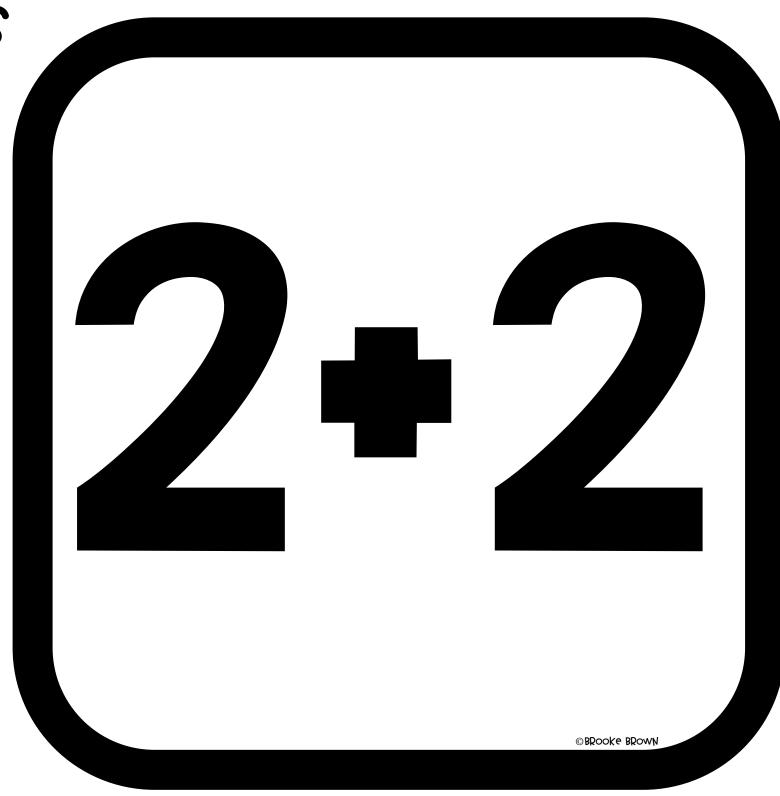
+I tacts

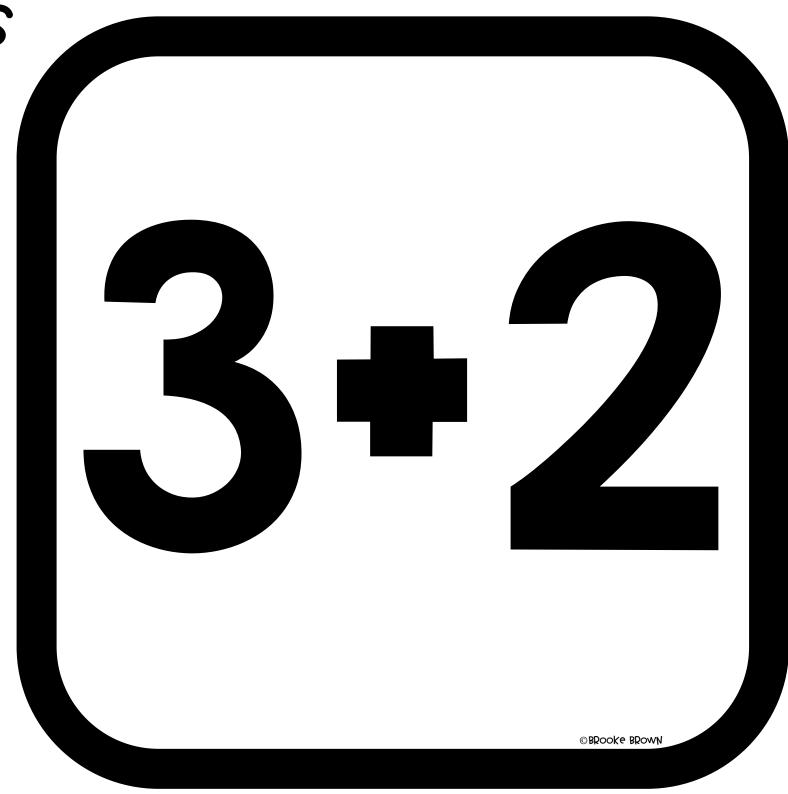
+I tacts

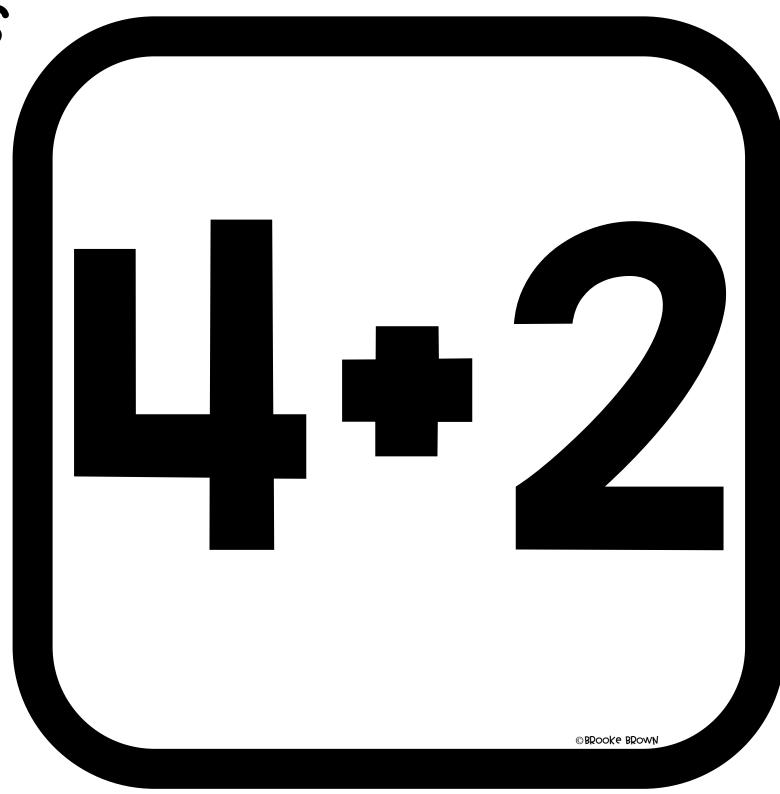




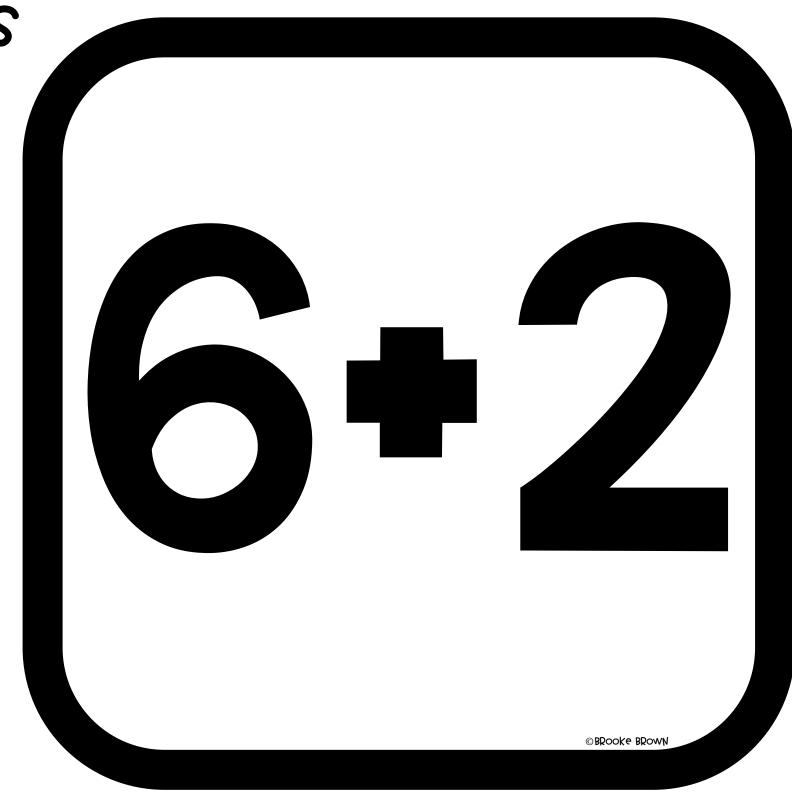


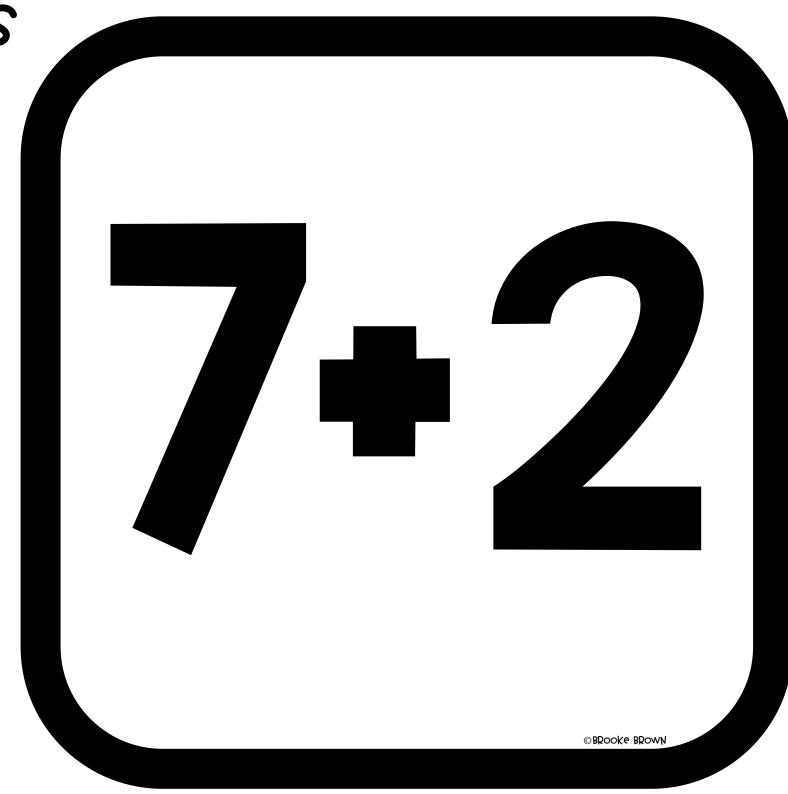


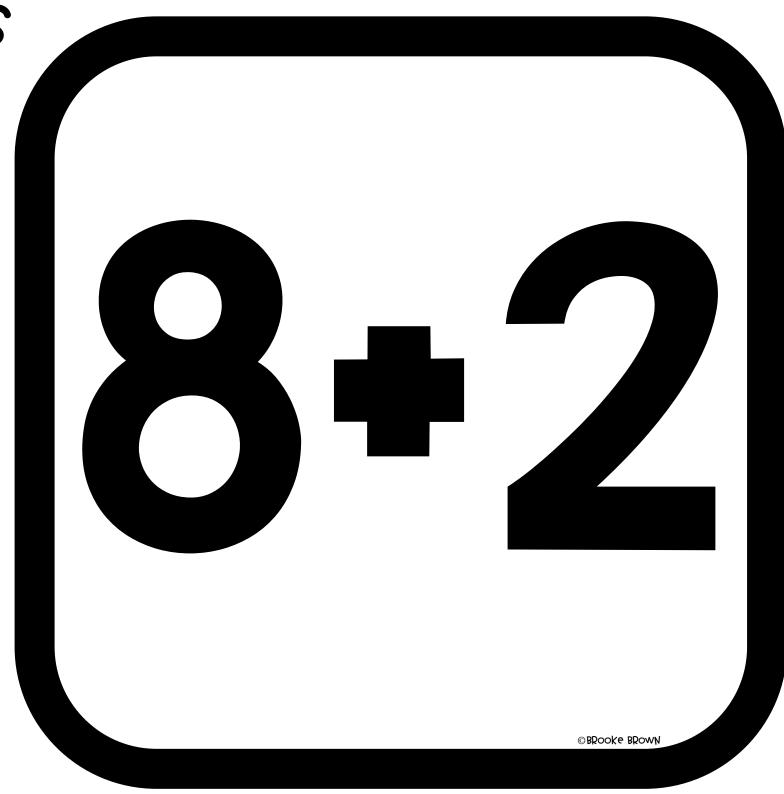




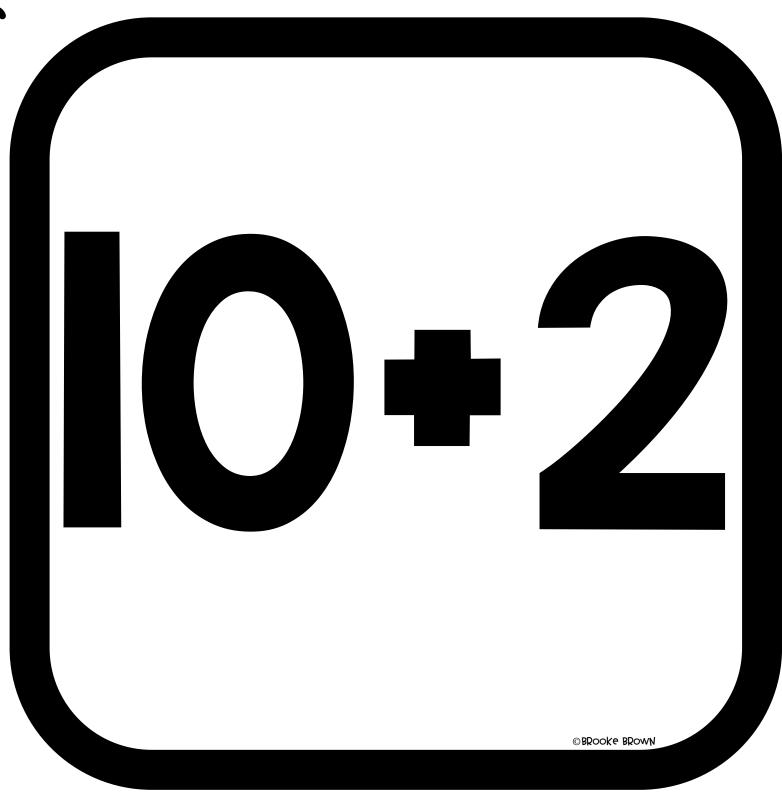


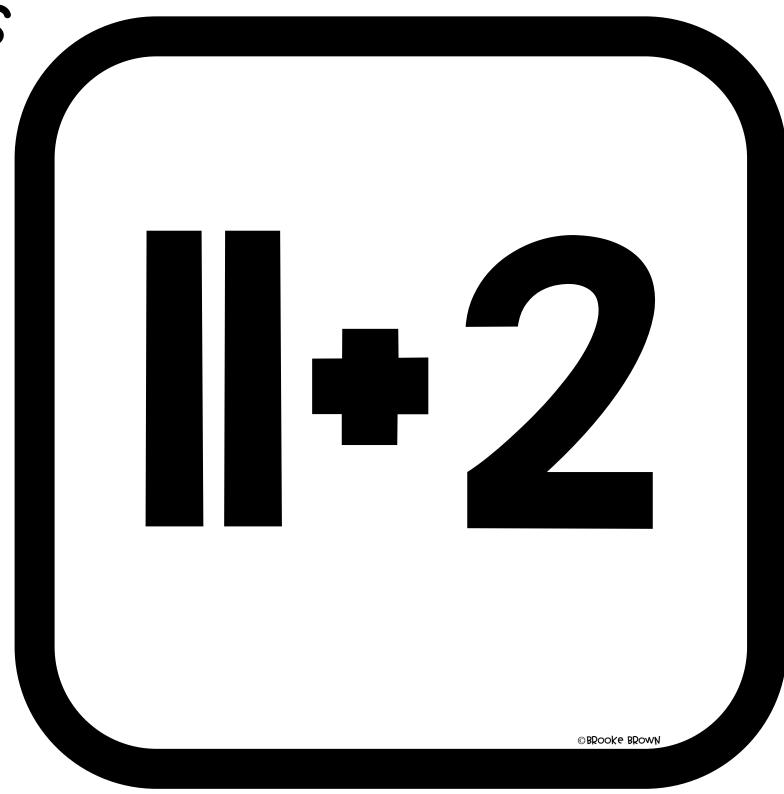


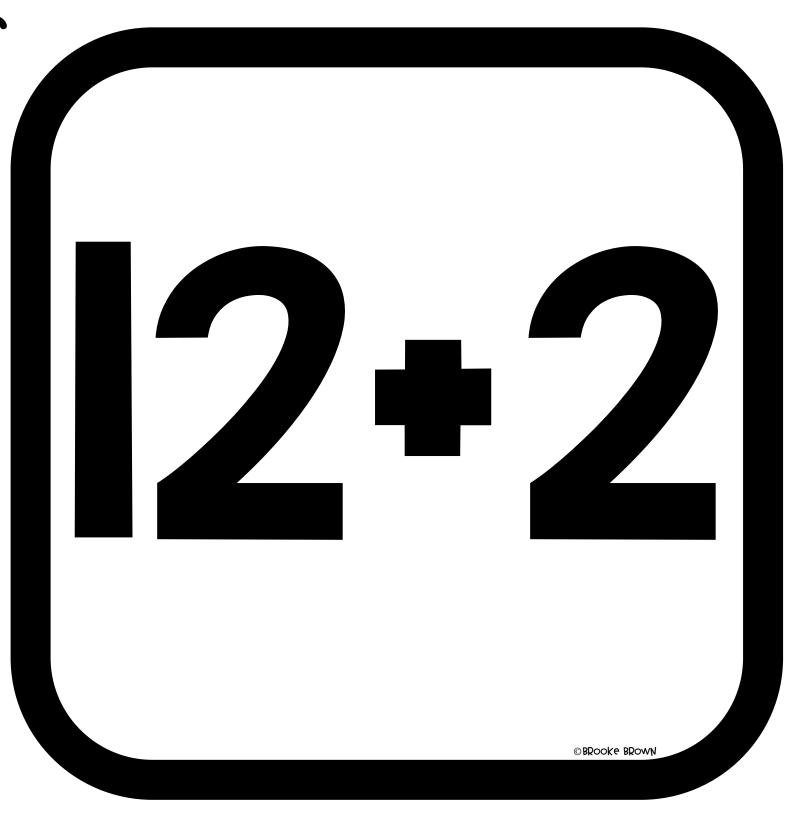


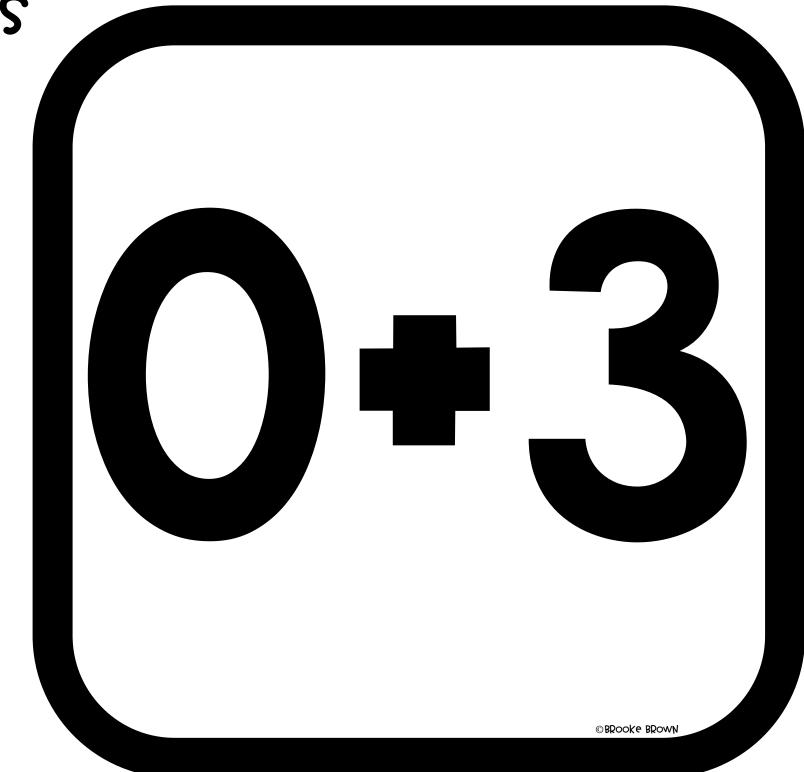




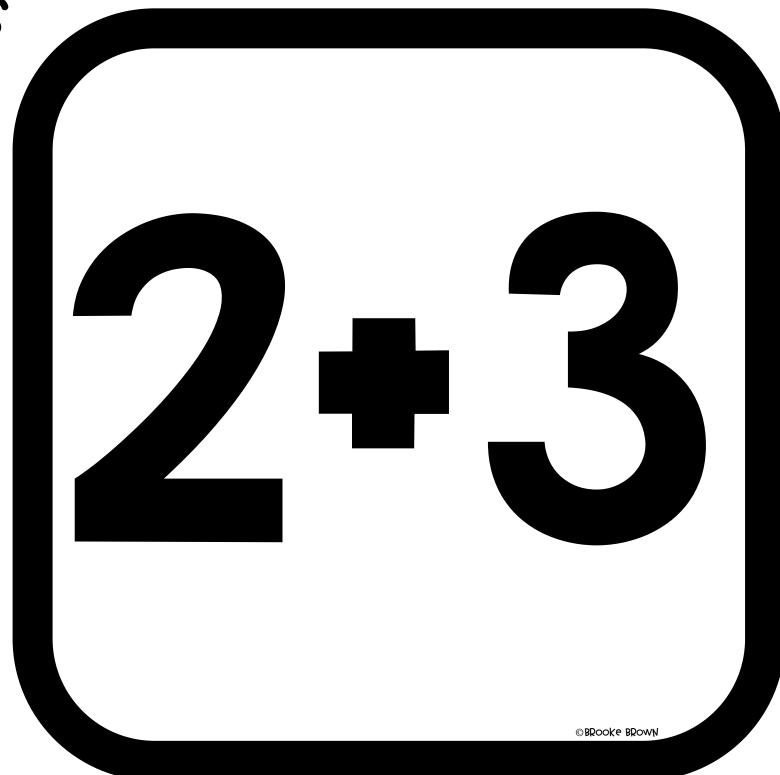


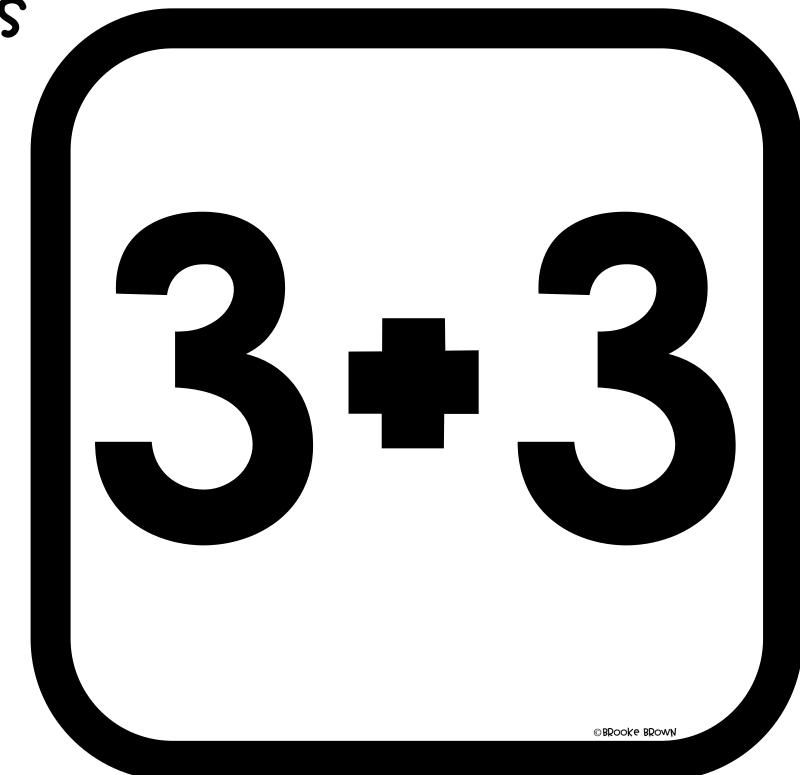


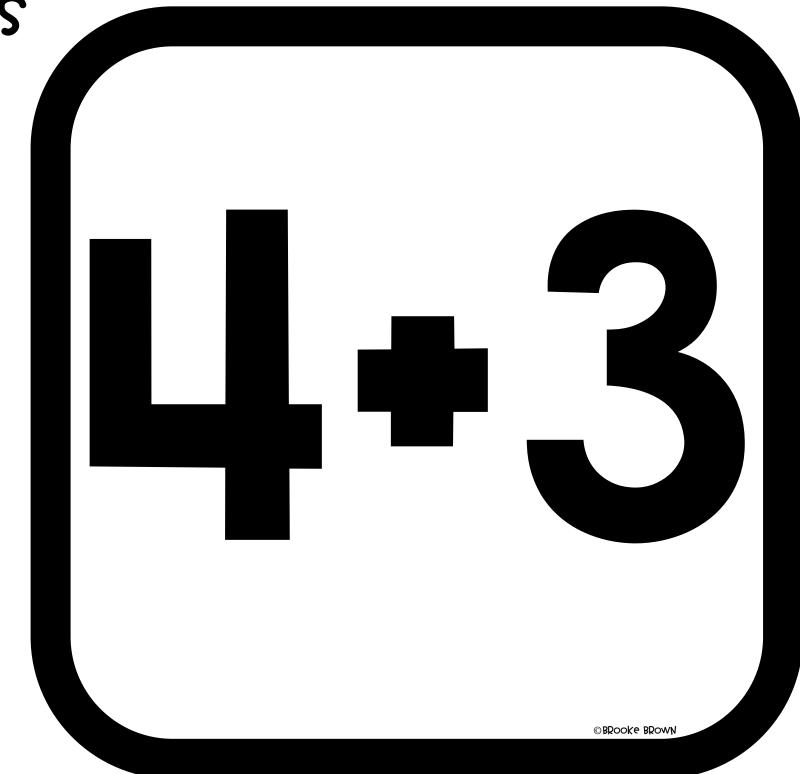


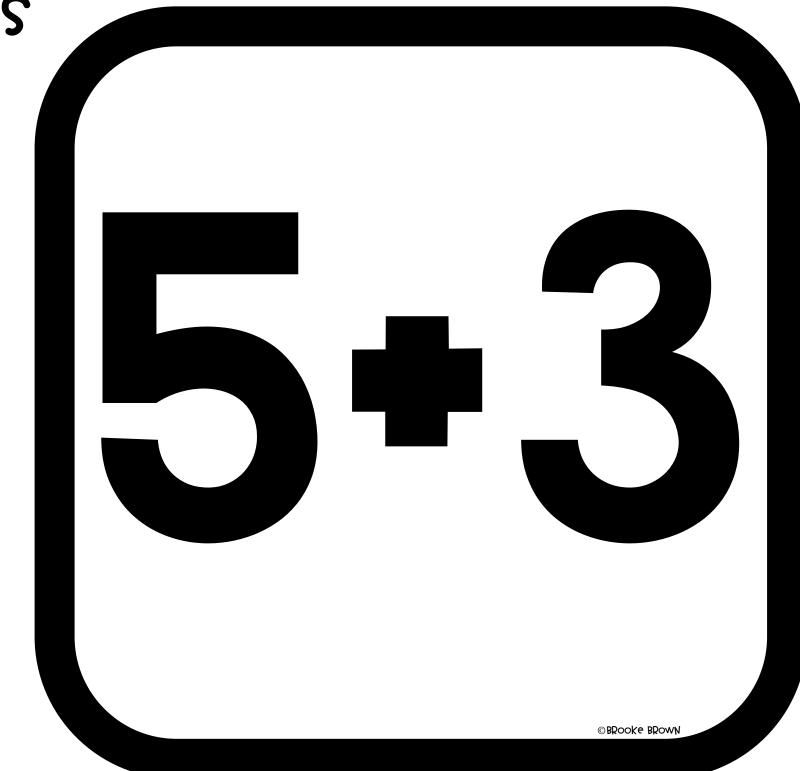


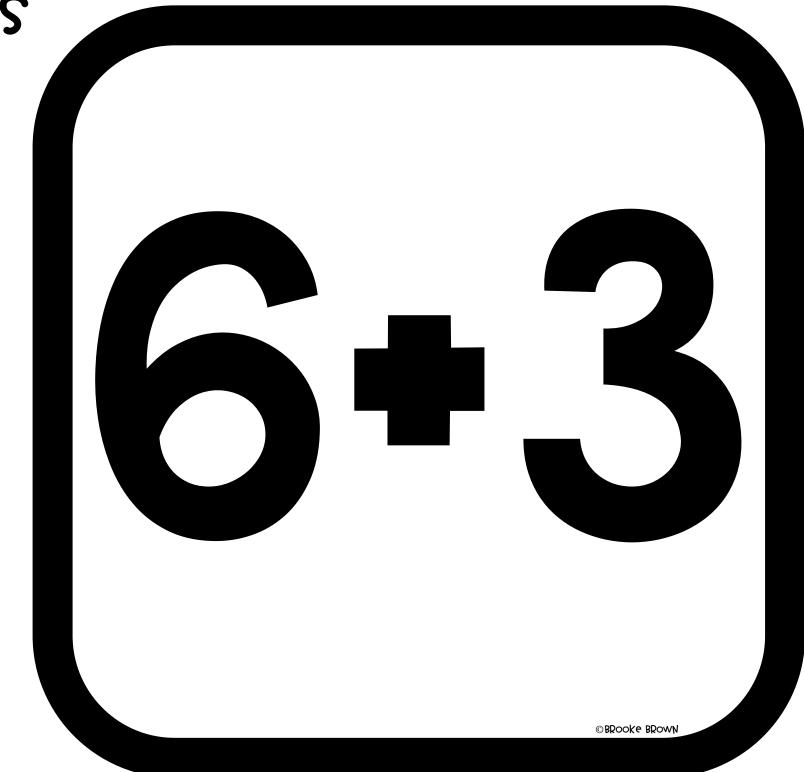
©BRooke BROWN

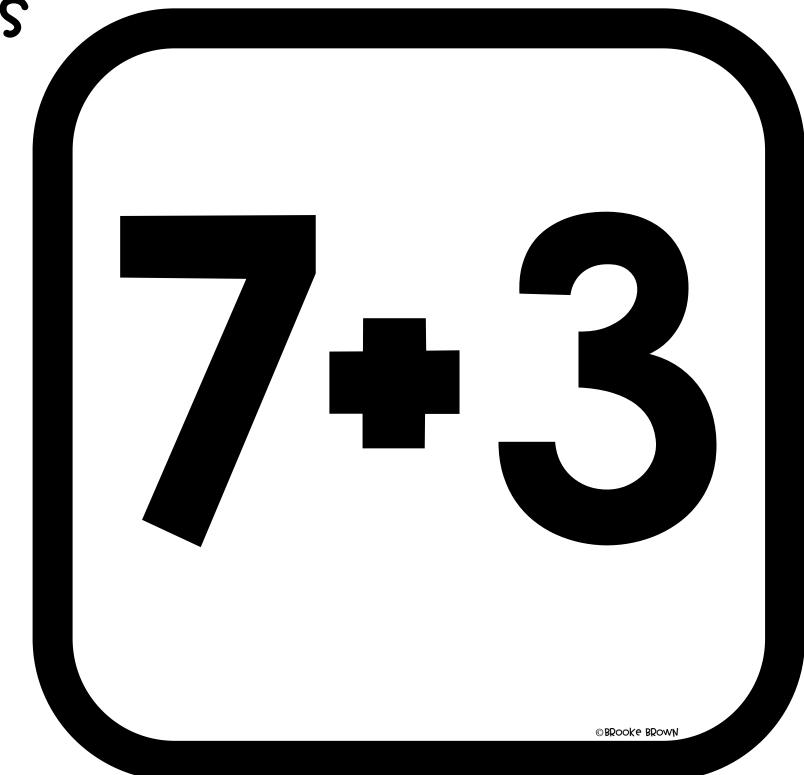


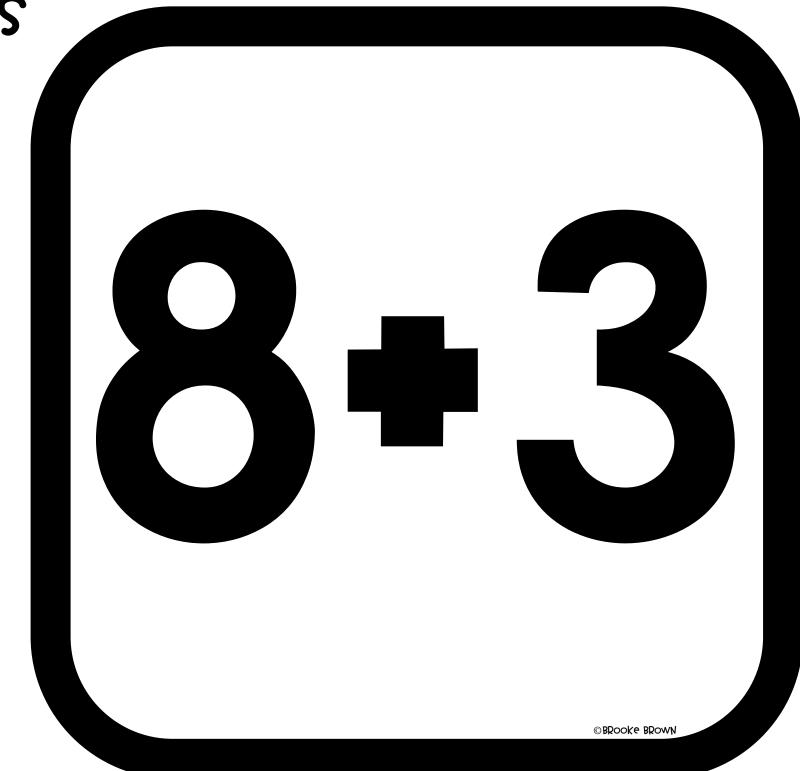


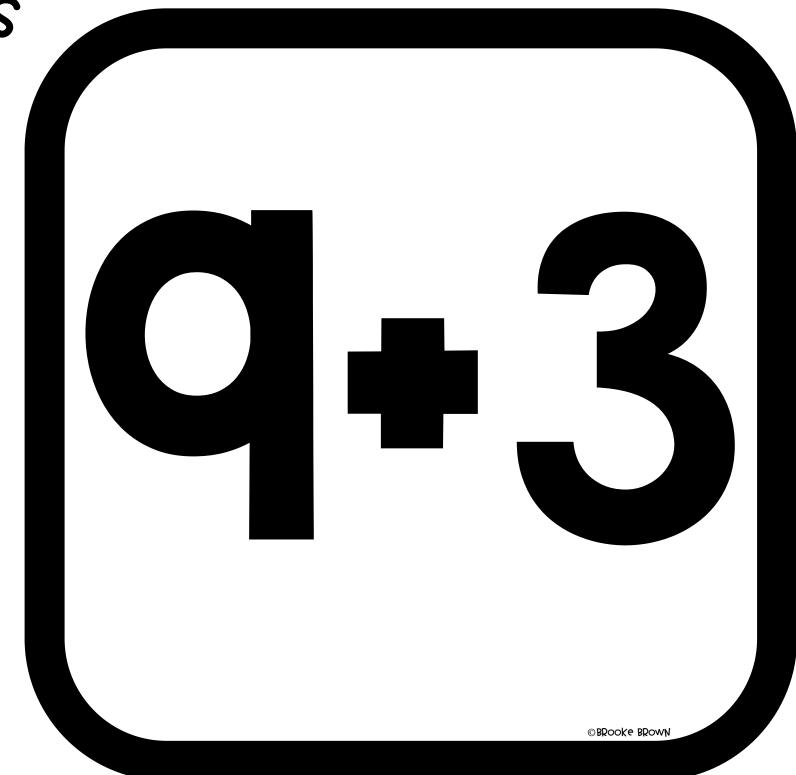


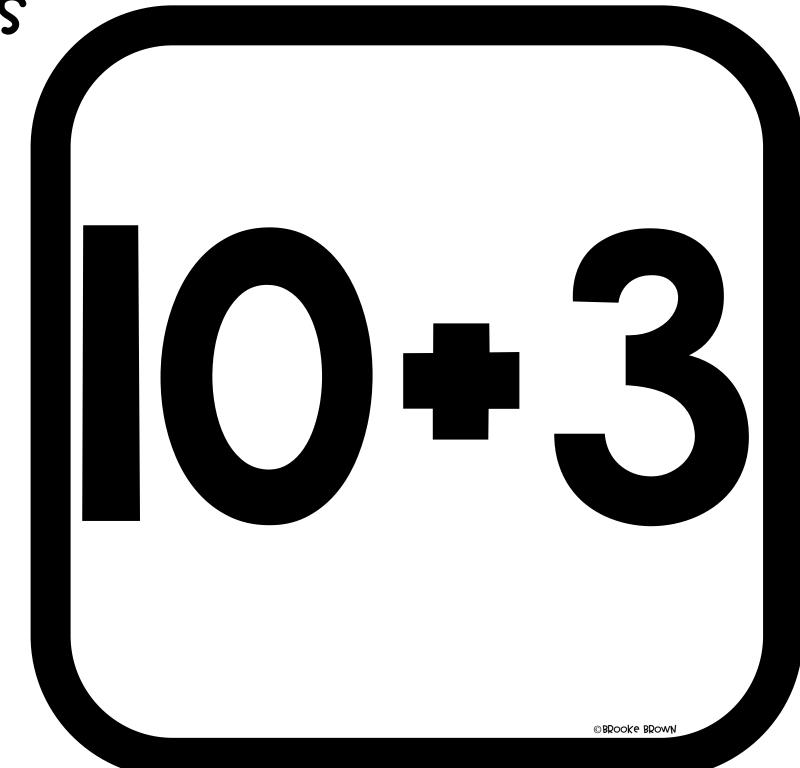






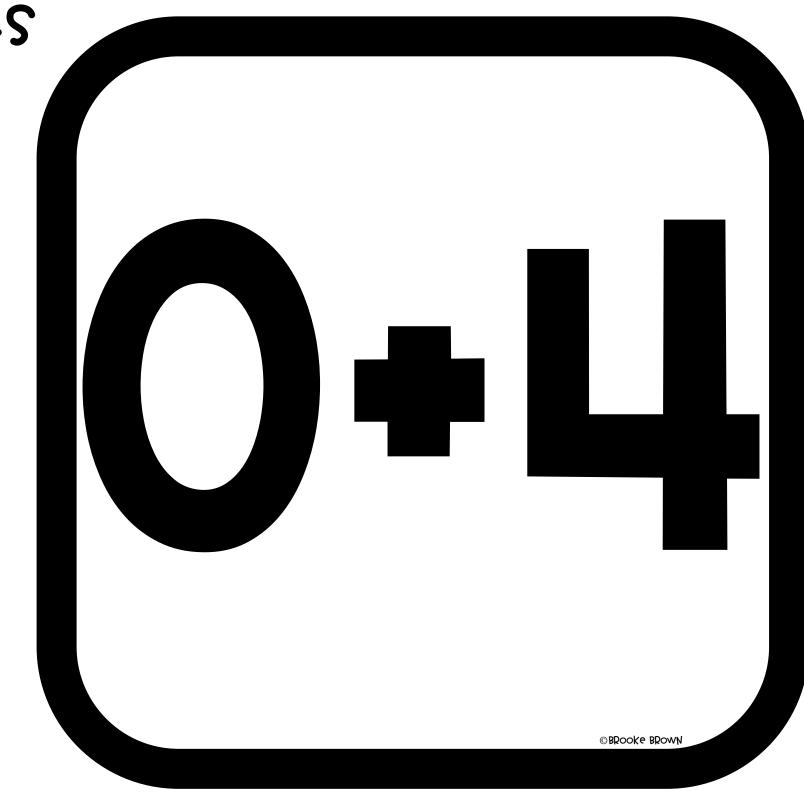


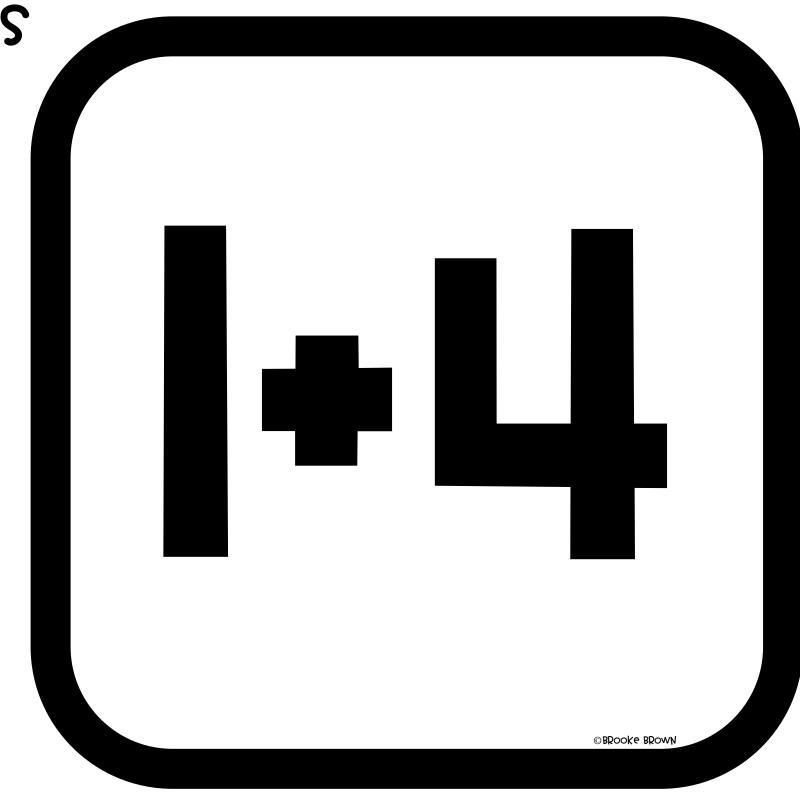




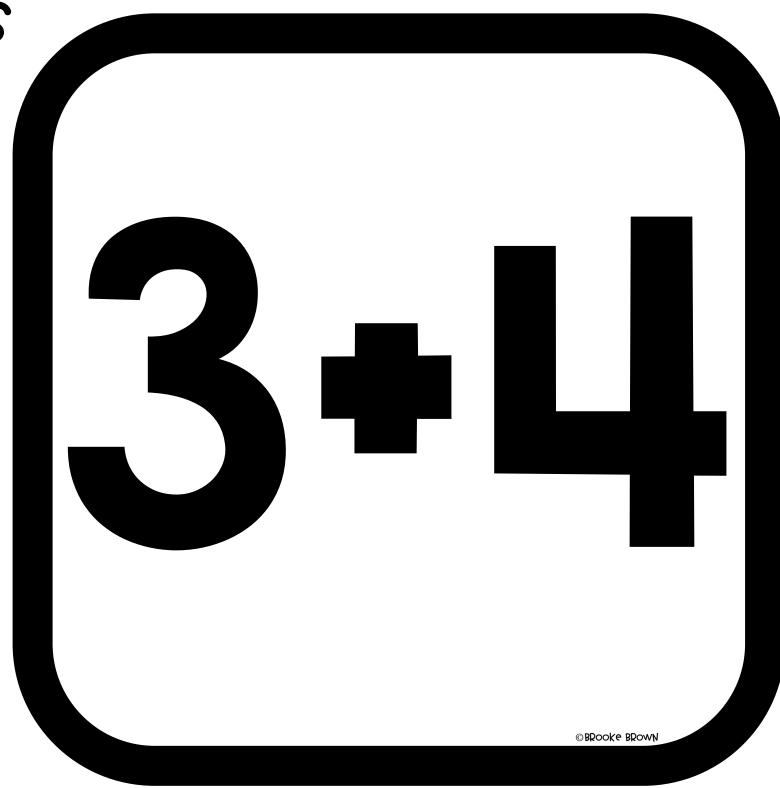
© BRooke BROWN

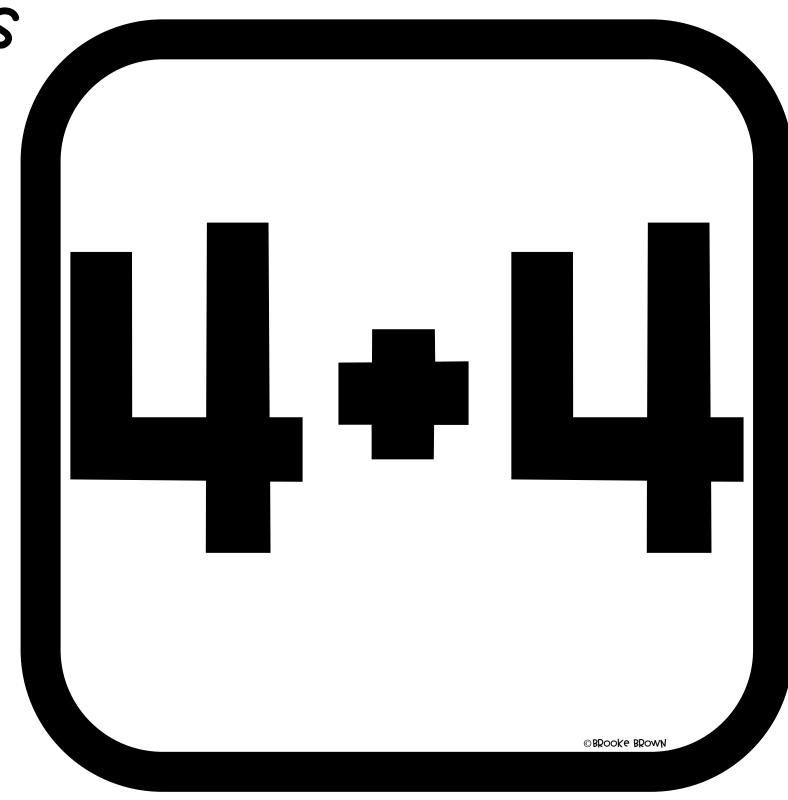
©BRooke BROWN

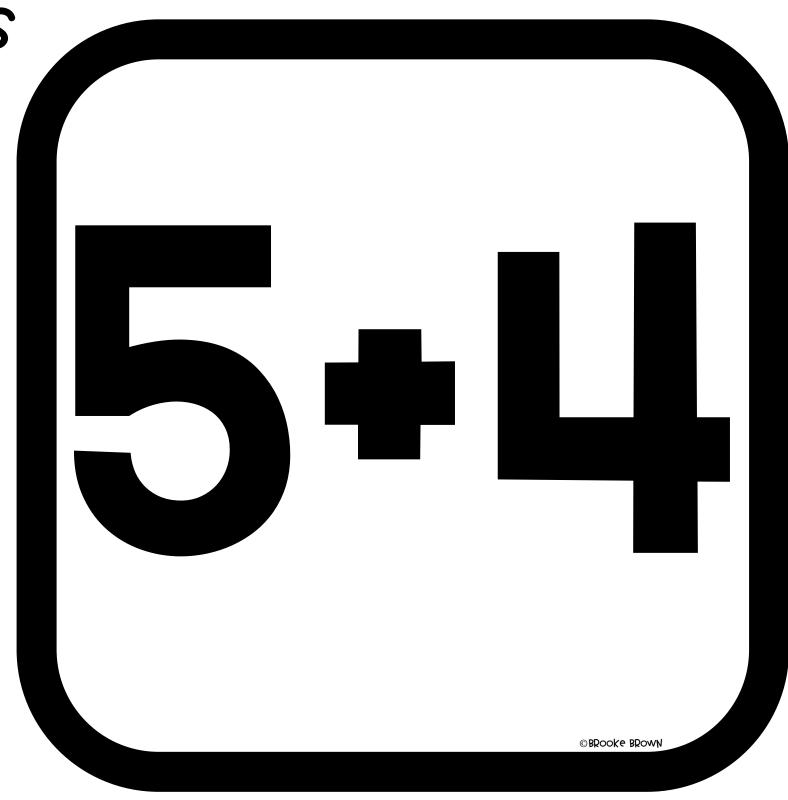


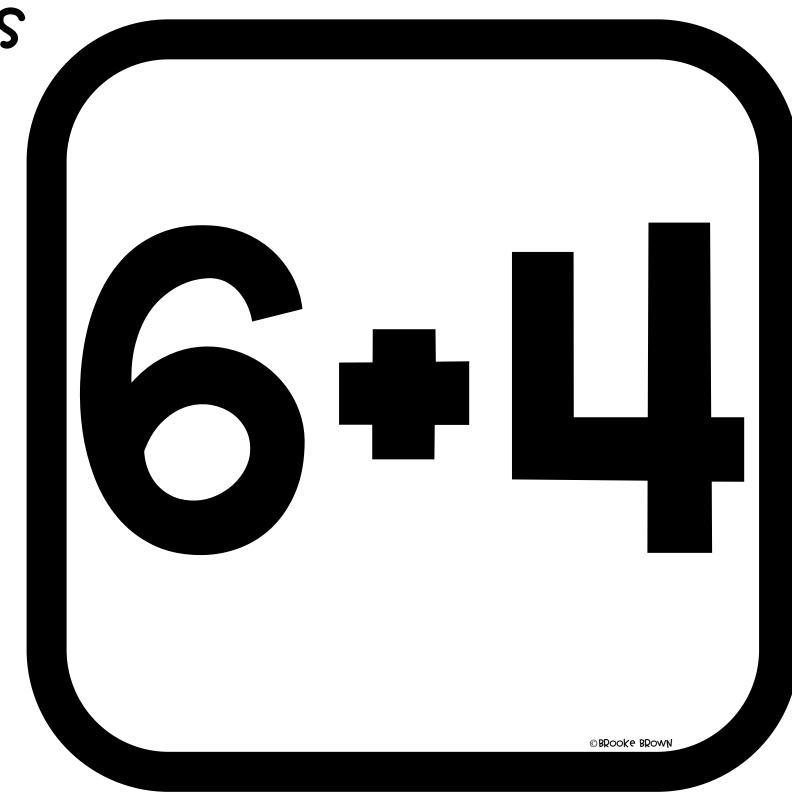


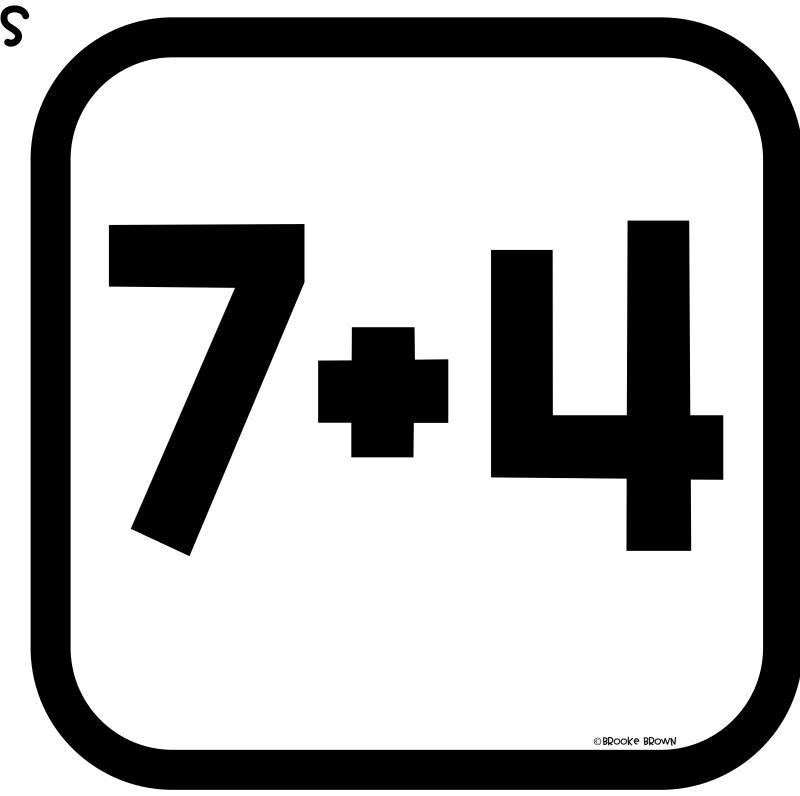


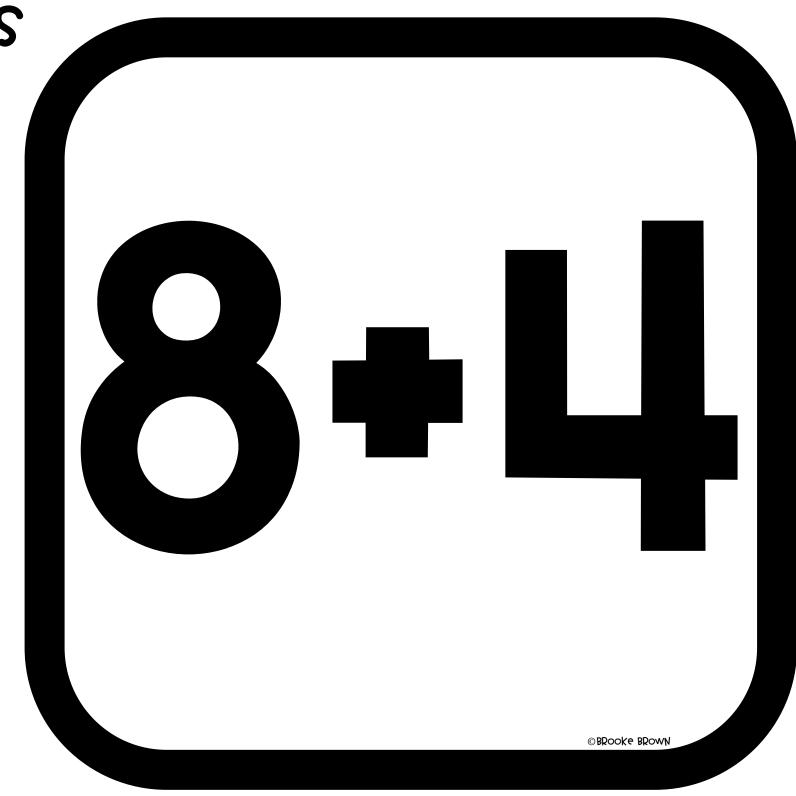


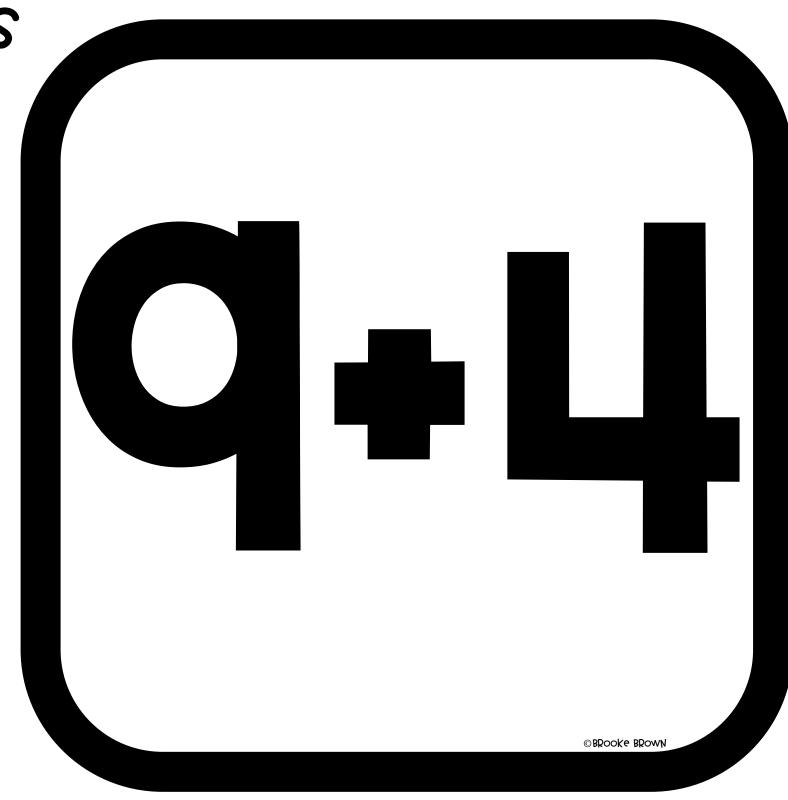


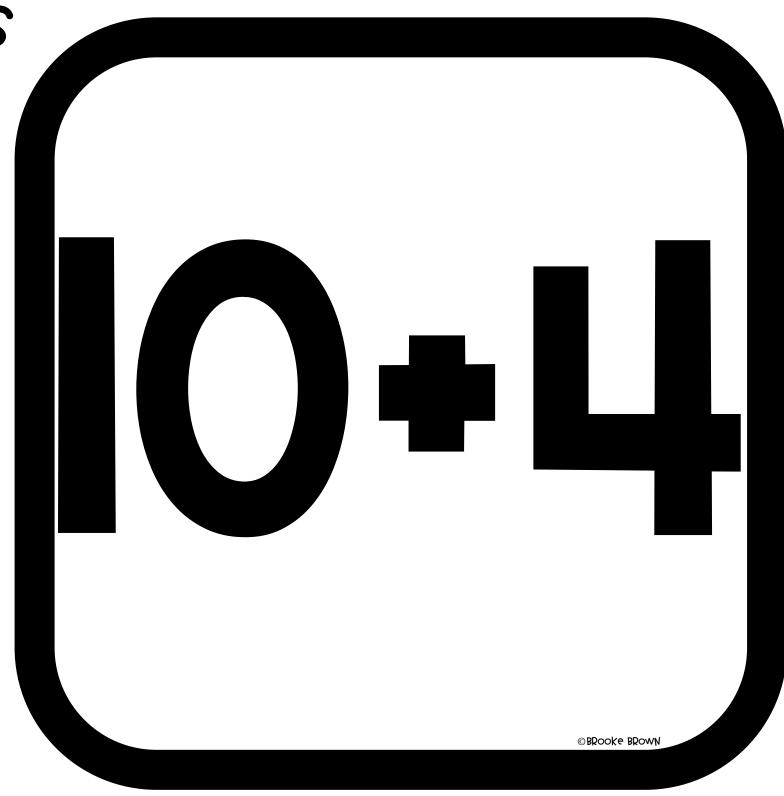


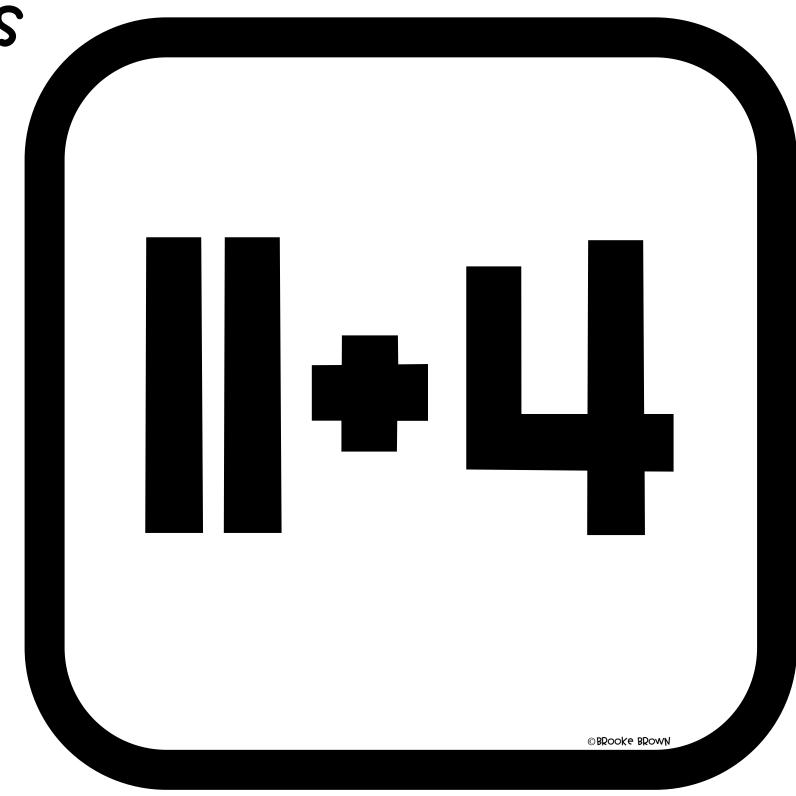


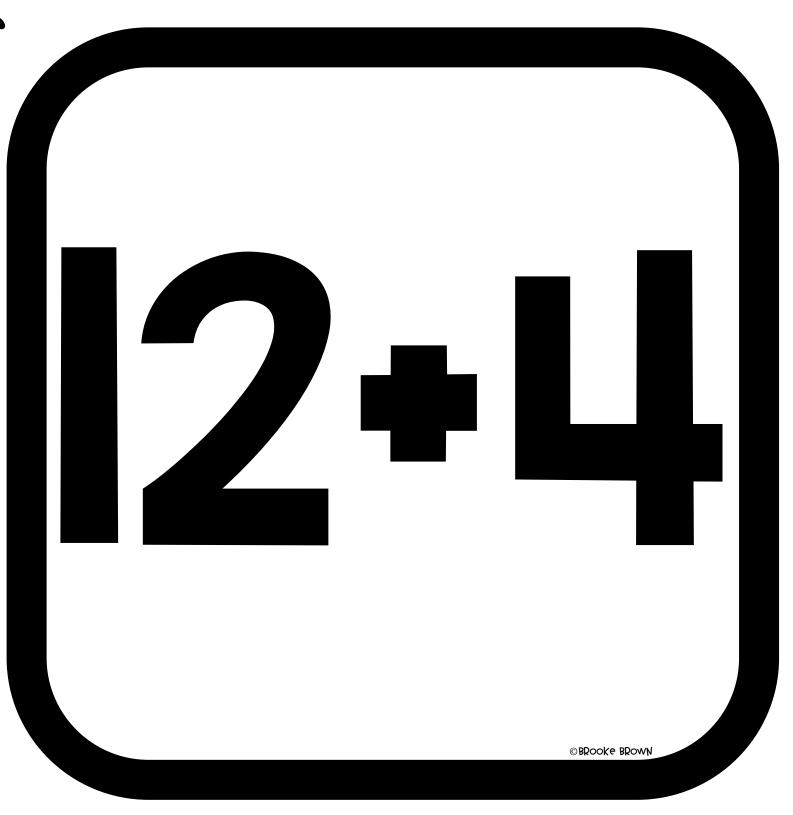


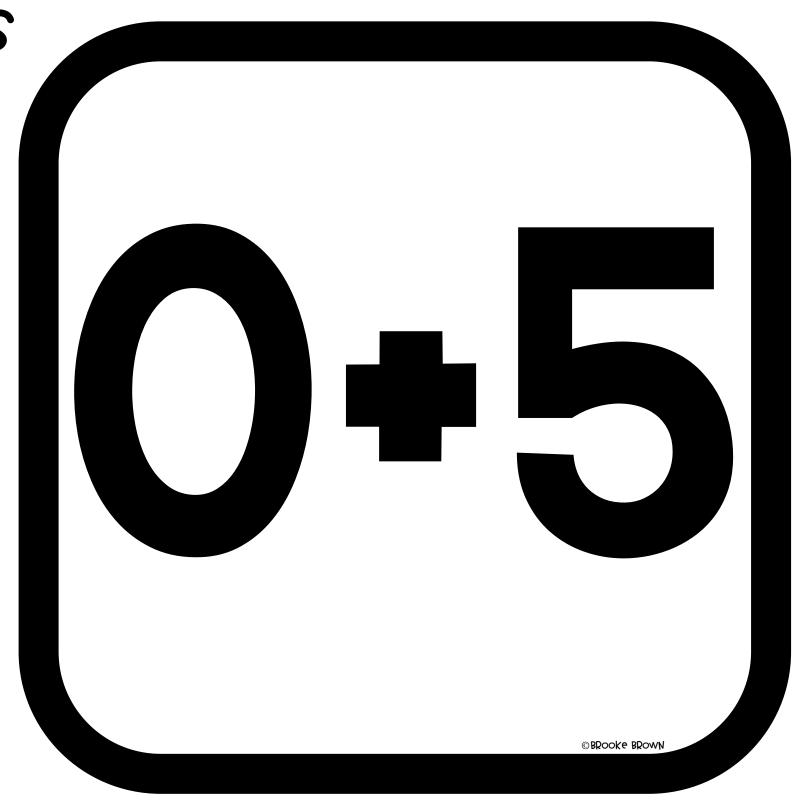


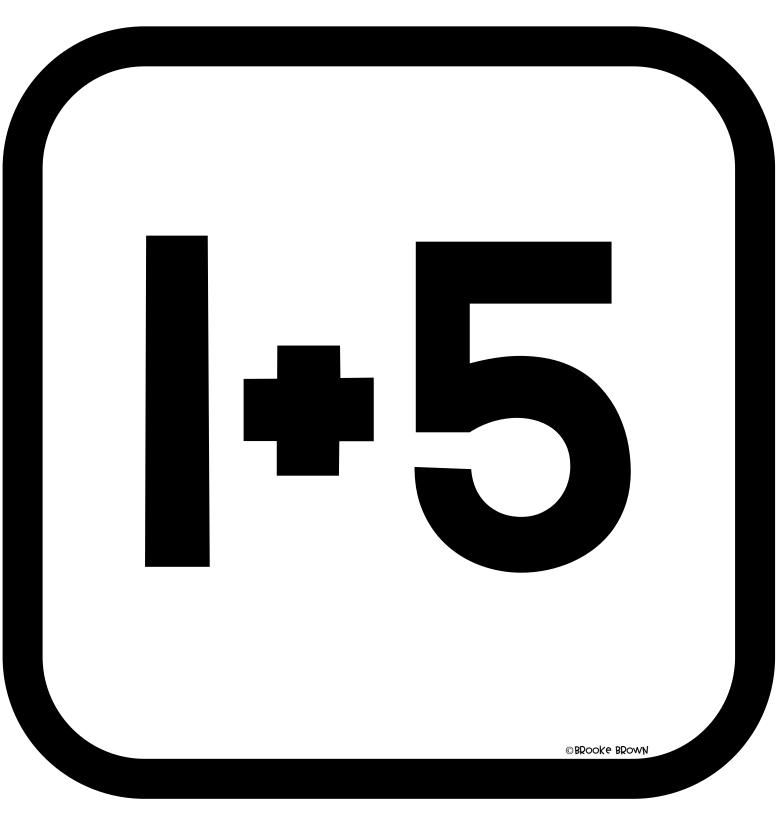




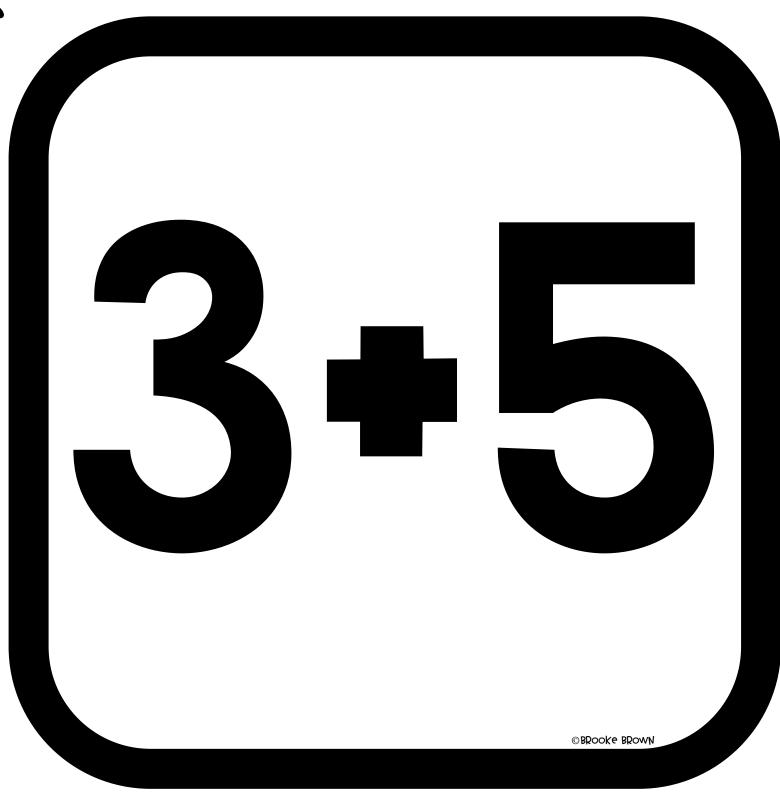


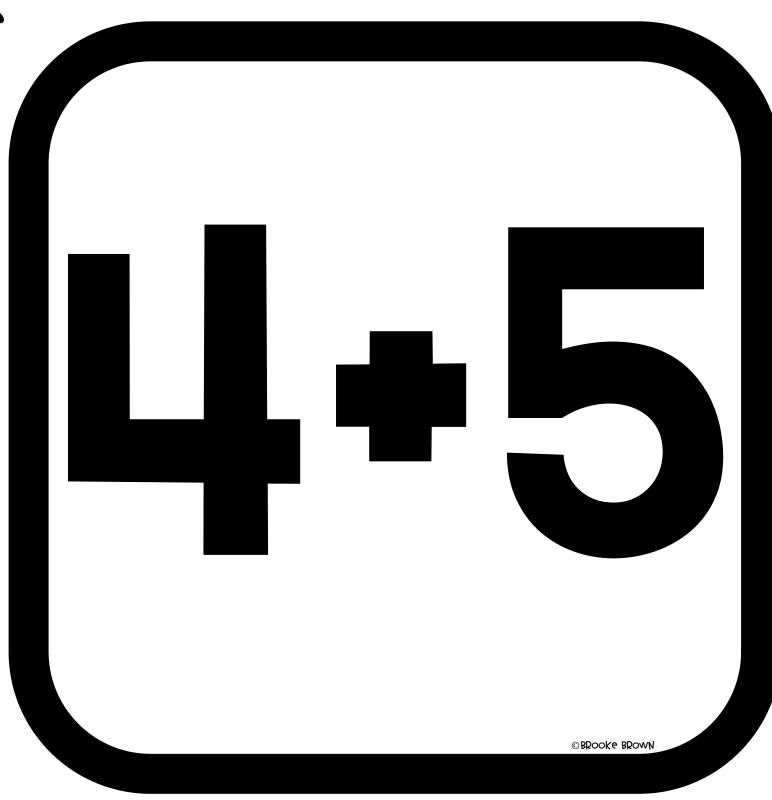








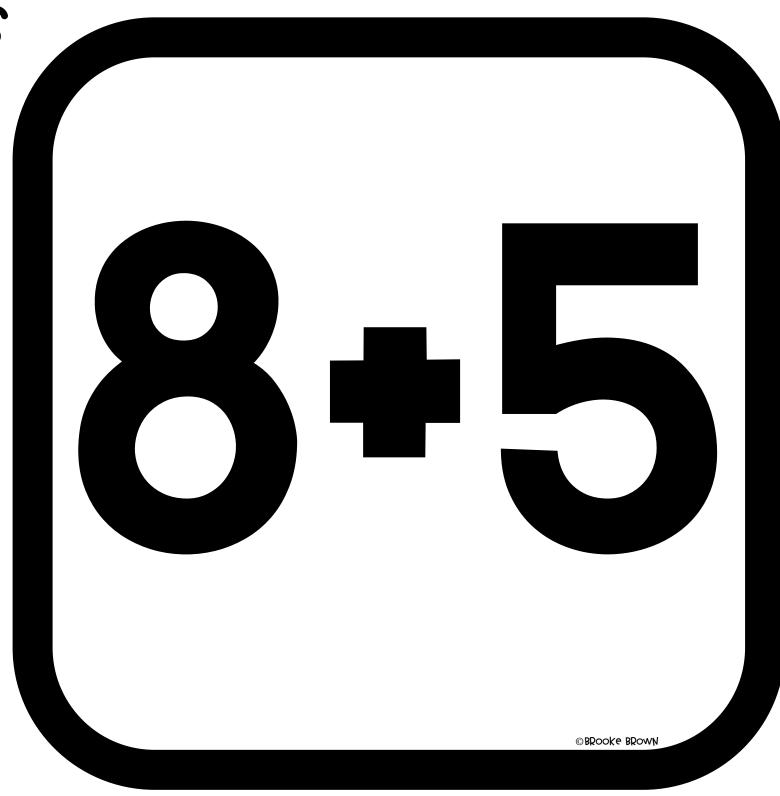




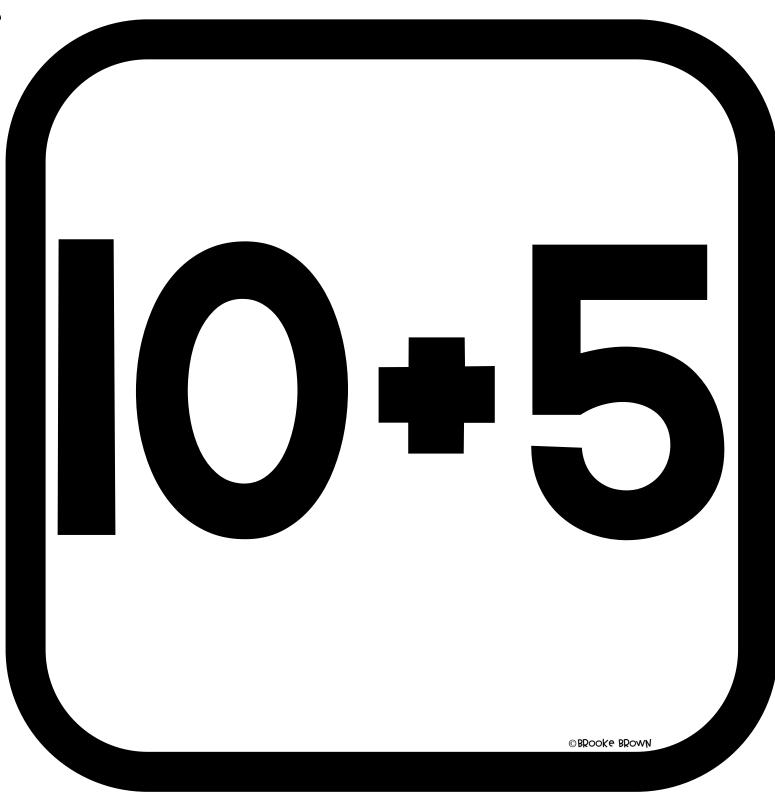
©BRooke BROWN

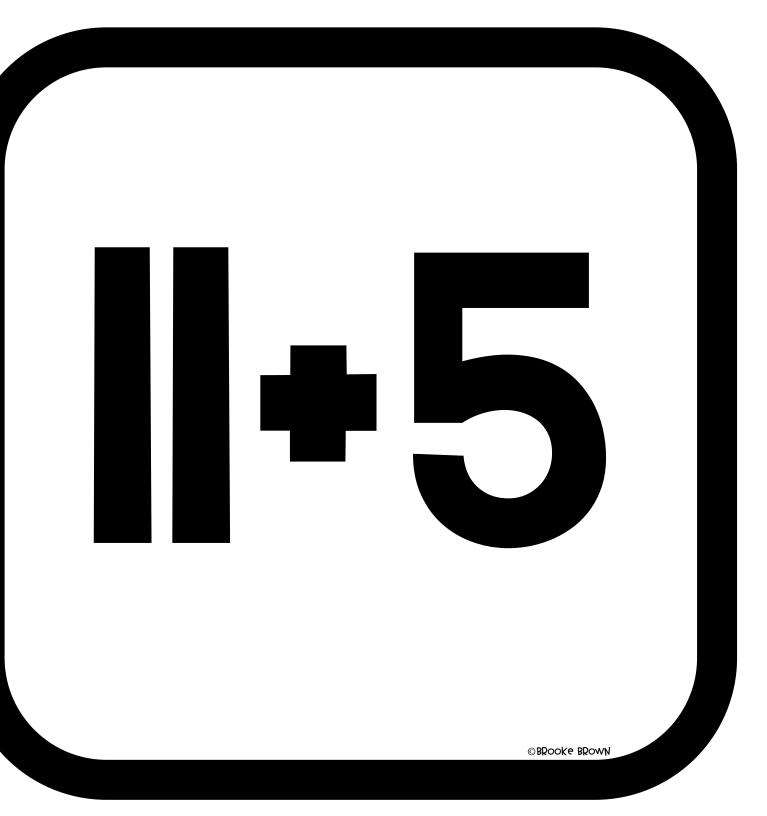


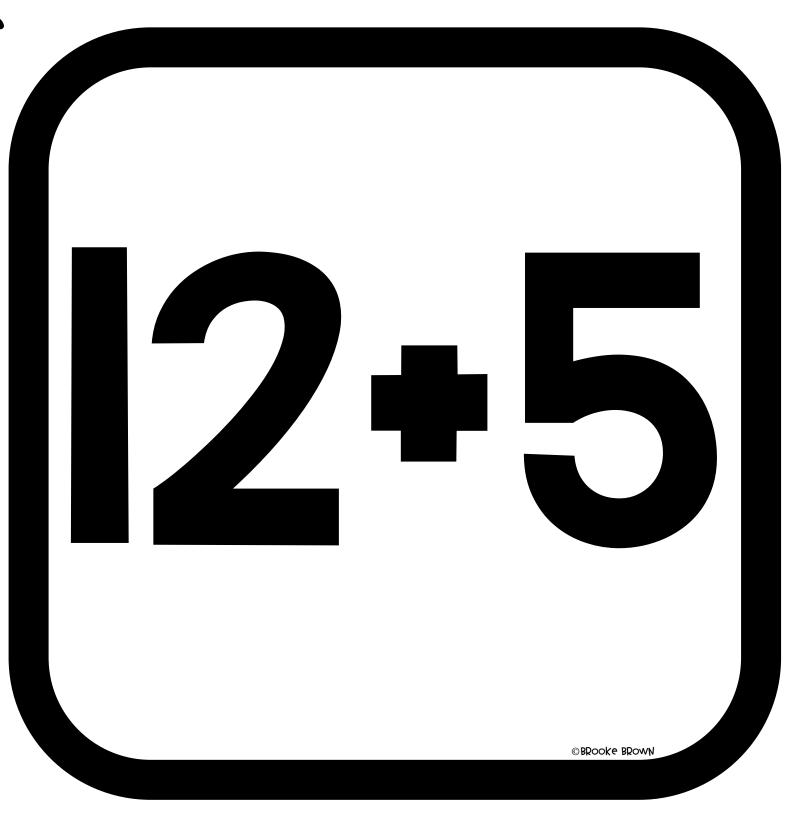




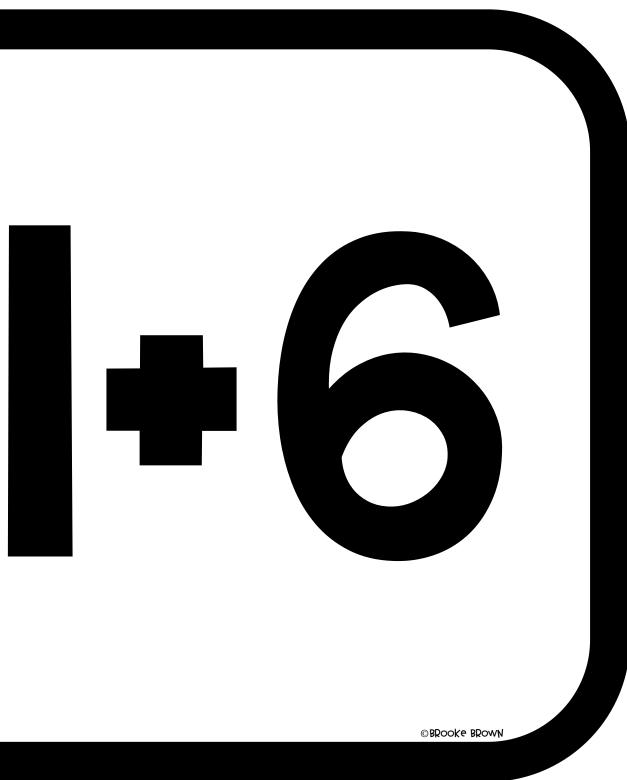
+5 facts ©BRooke BROWN



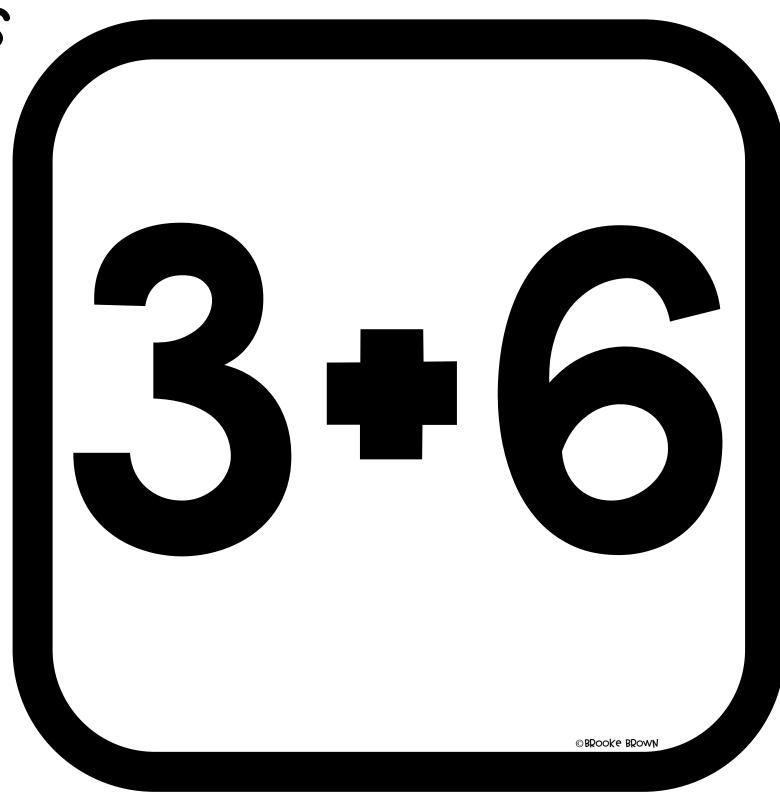




©BRooke BROWN



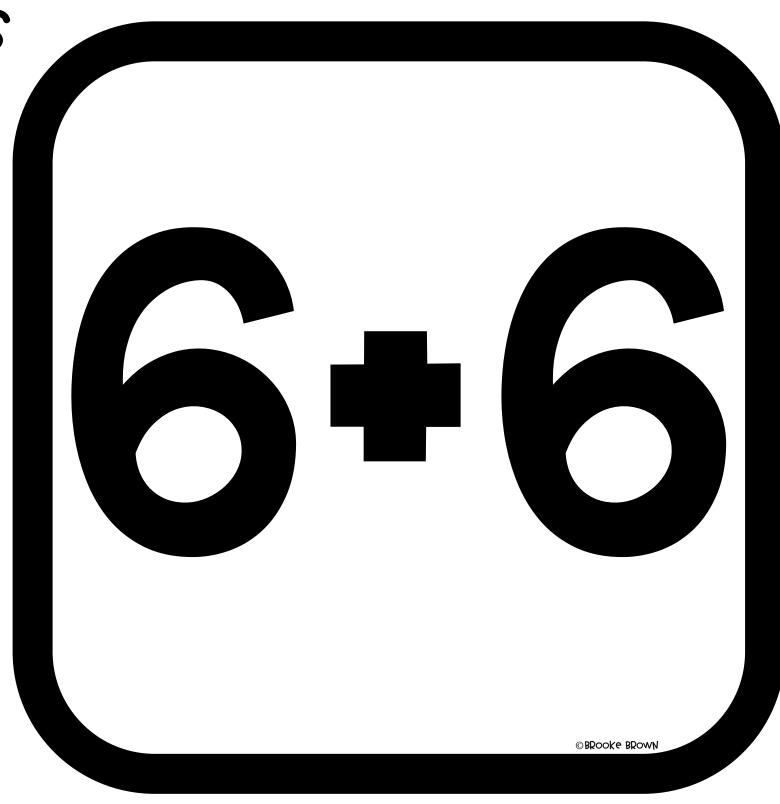


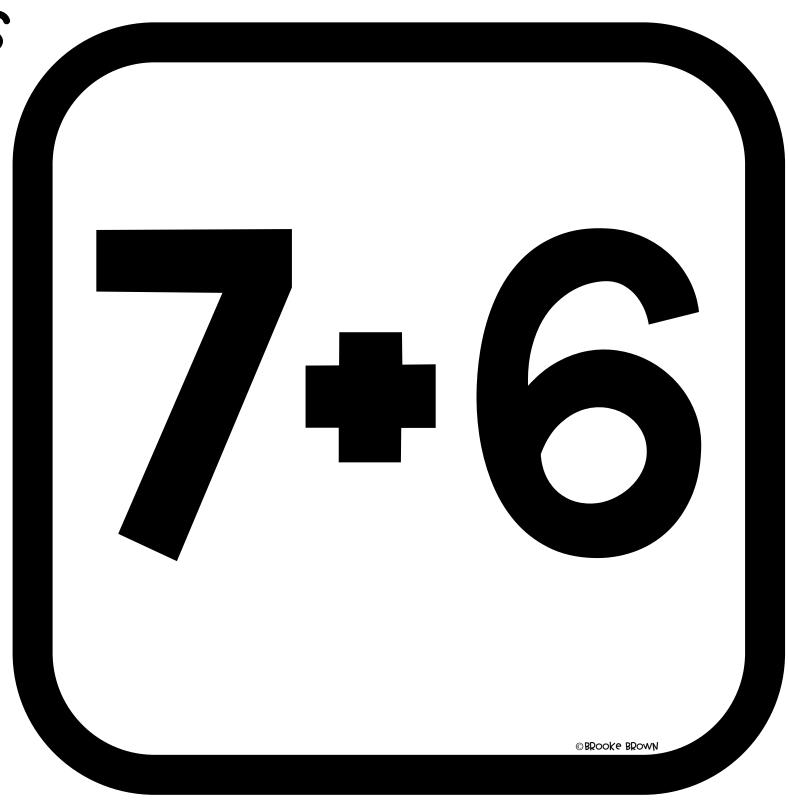


+6 tacts ©BRooke BROWN

©BRooke BROWN

+e tacts



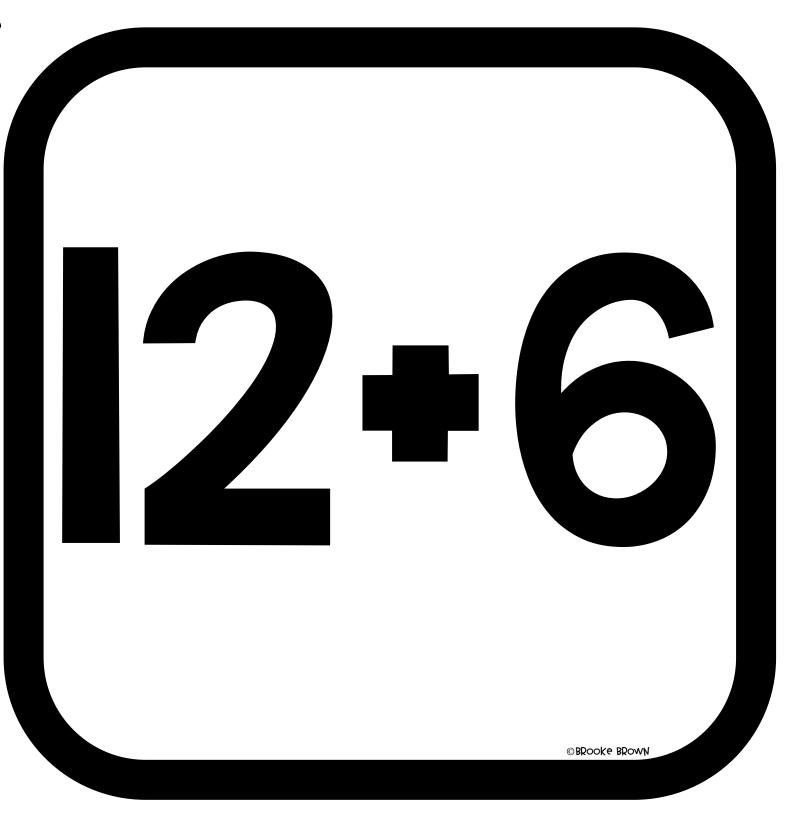


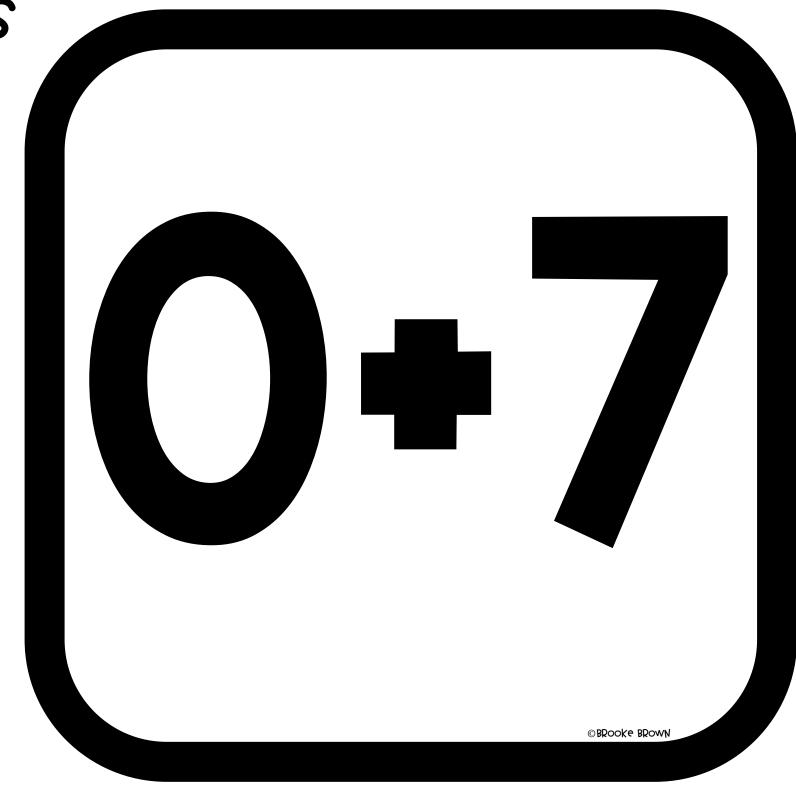
©BRooke BROWN

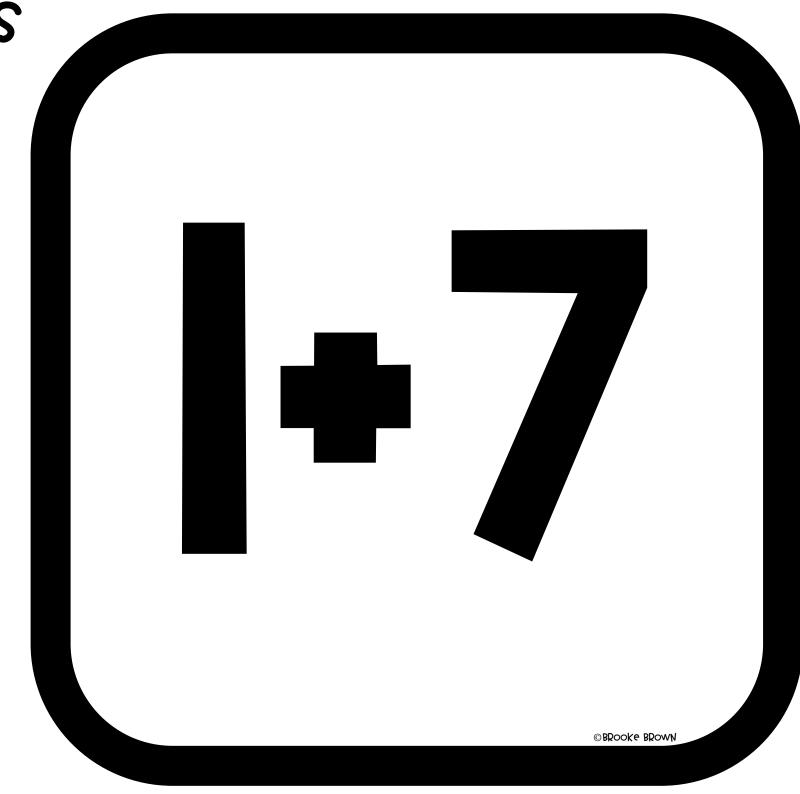
©BRooke BROWN

+6 tacts ©BRooke BROWN

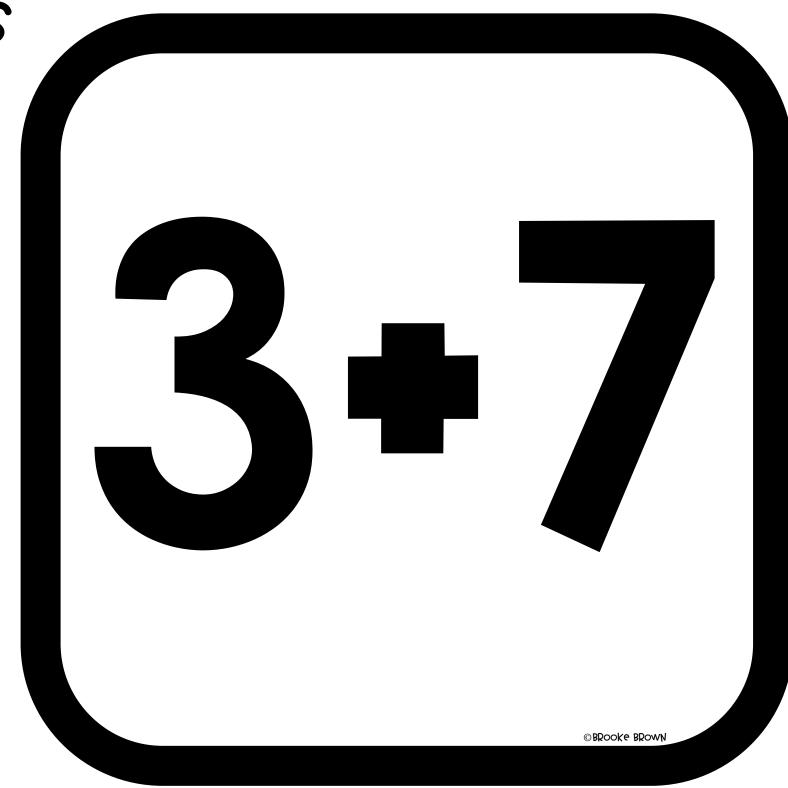


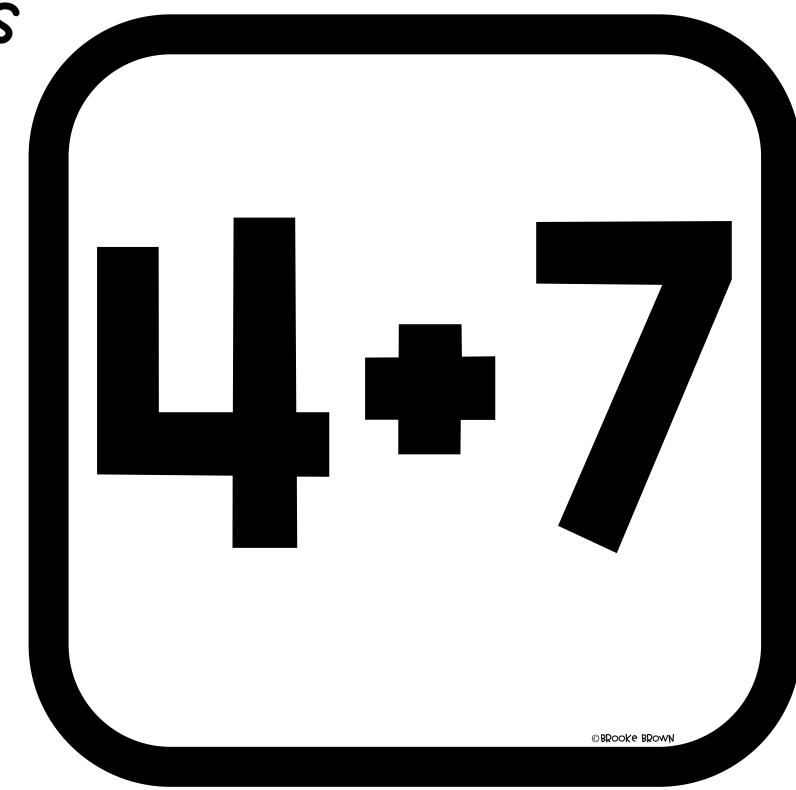


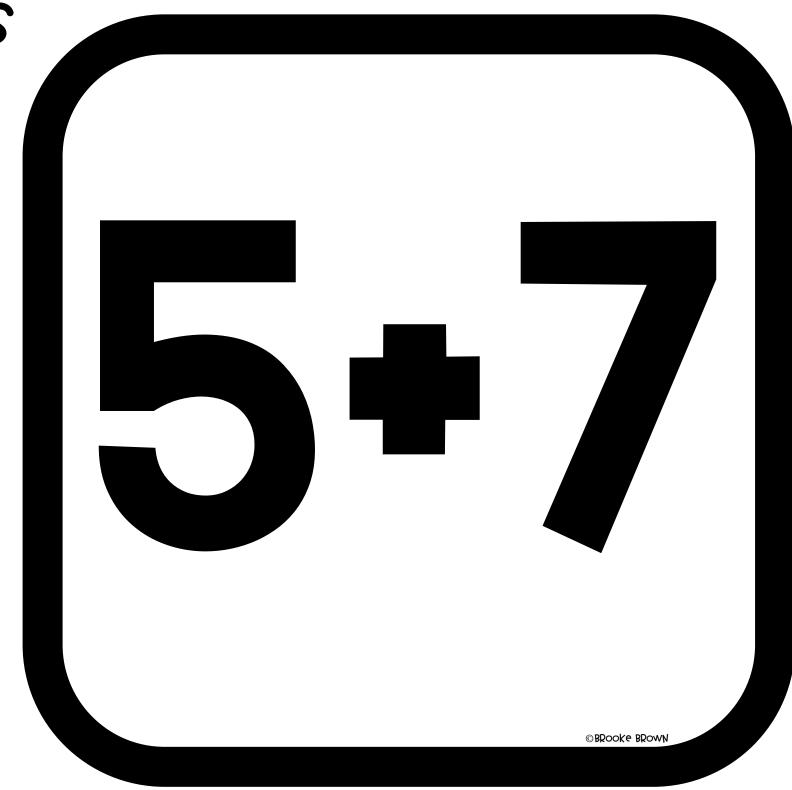


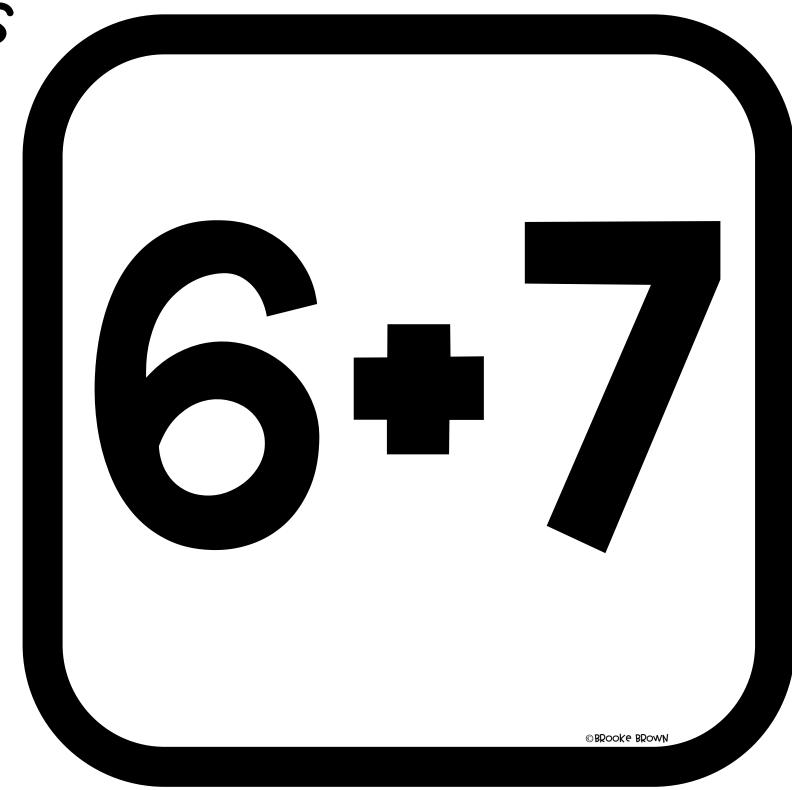




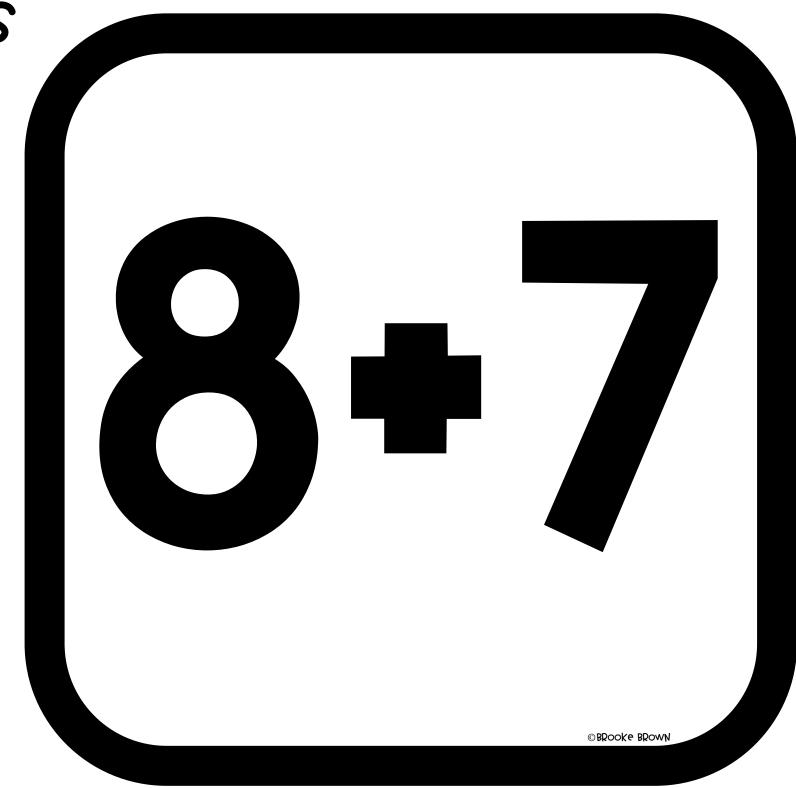




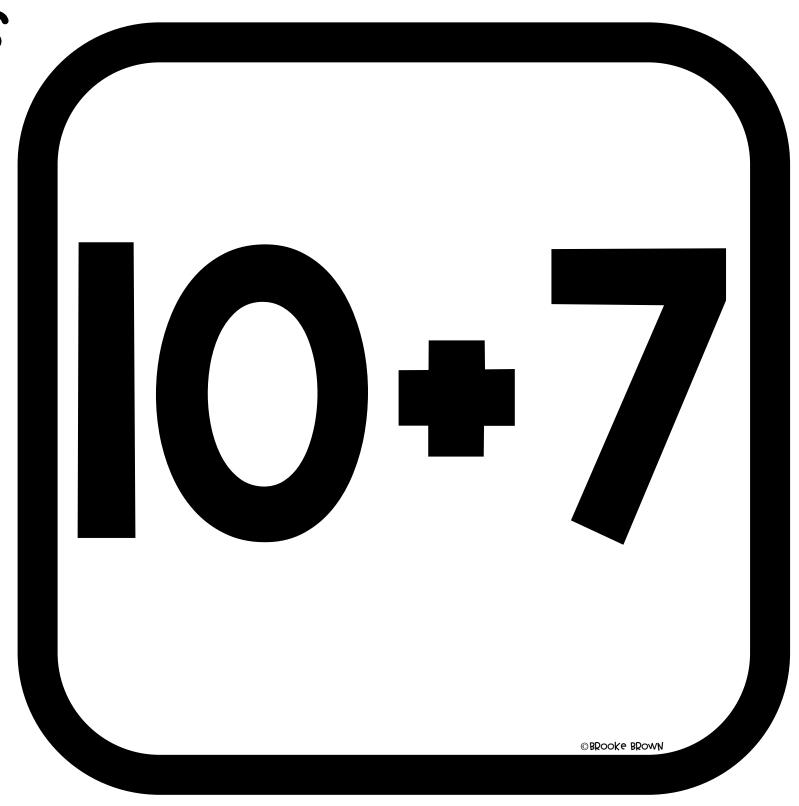


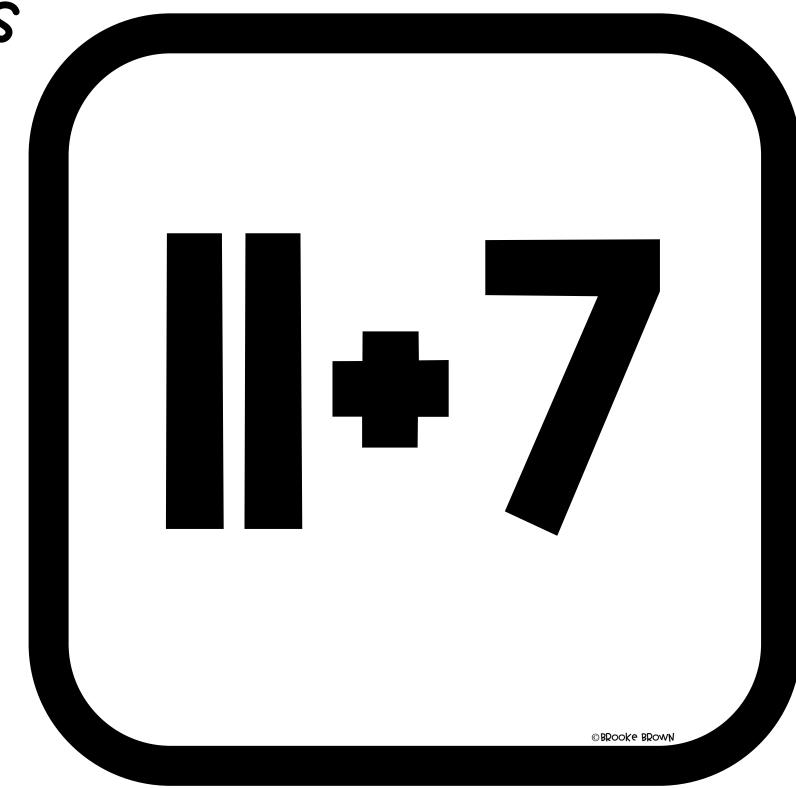






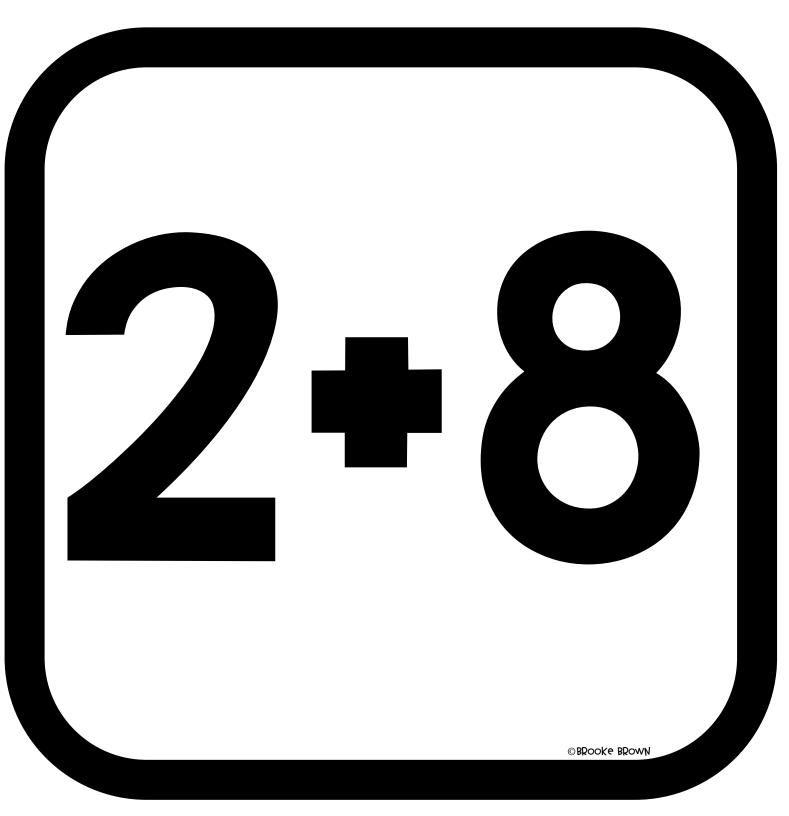


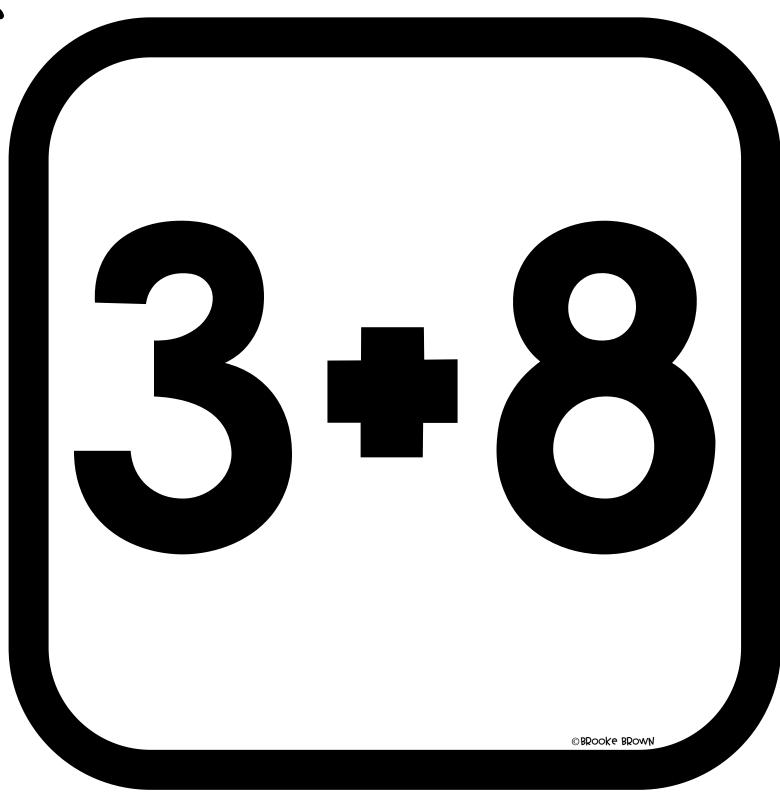






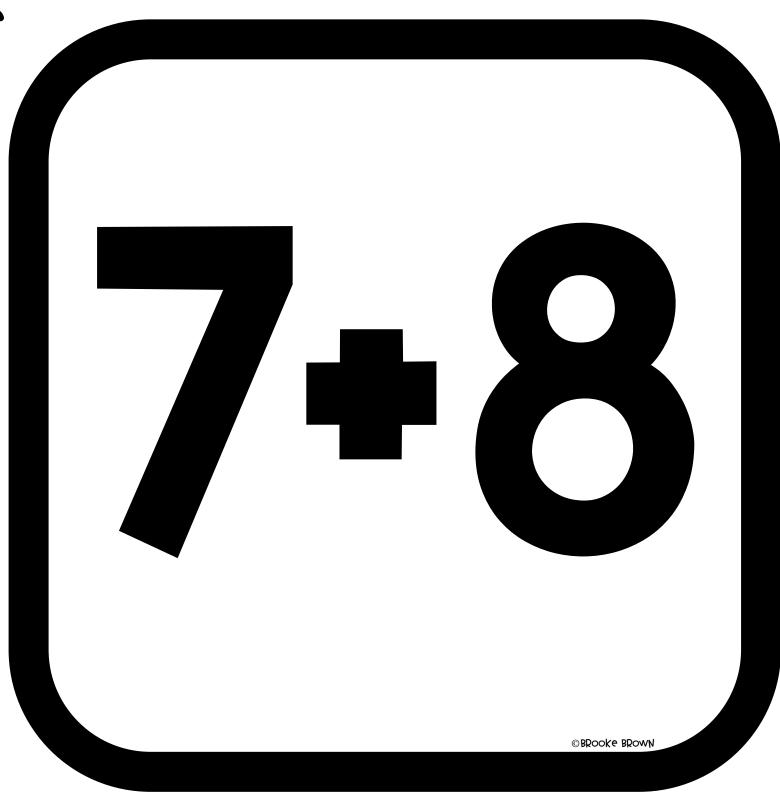
+8 tacts ©BRooke BROWN



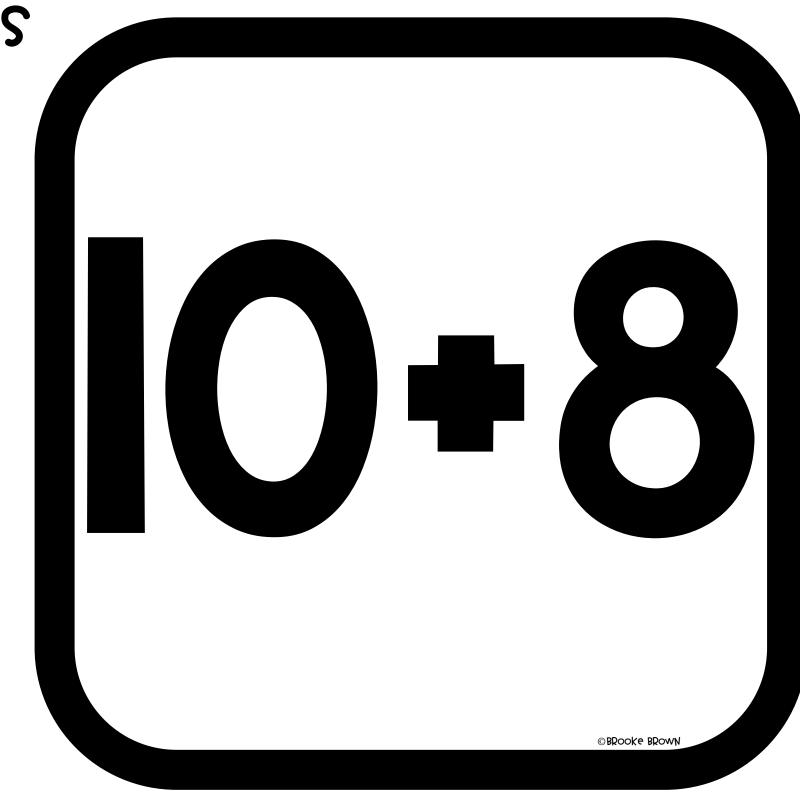


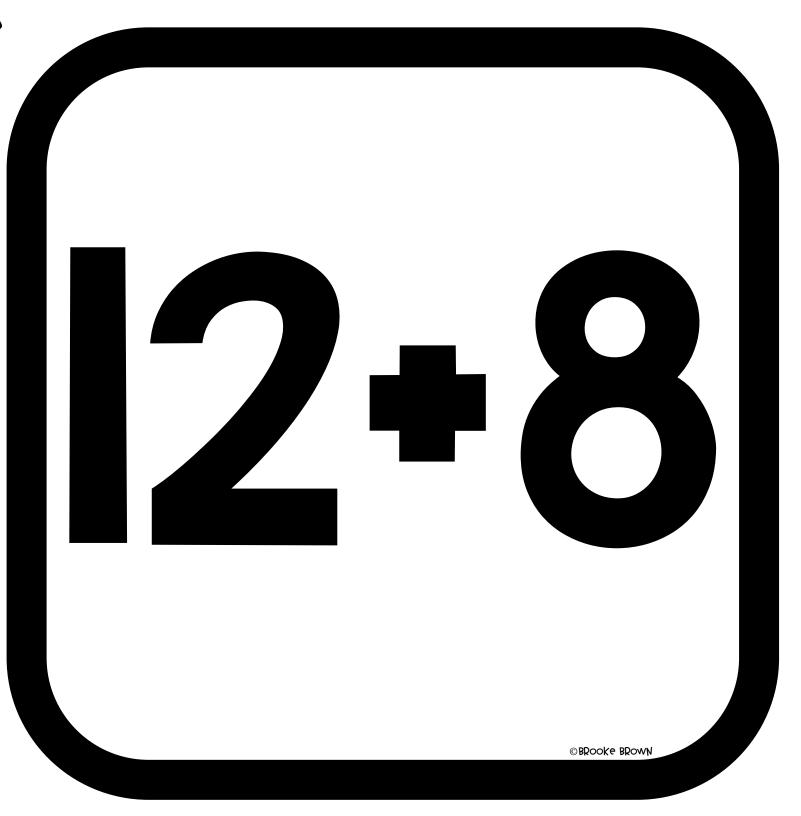
+8 tacts ©BRooke BROWN

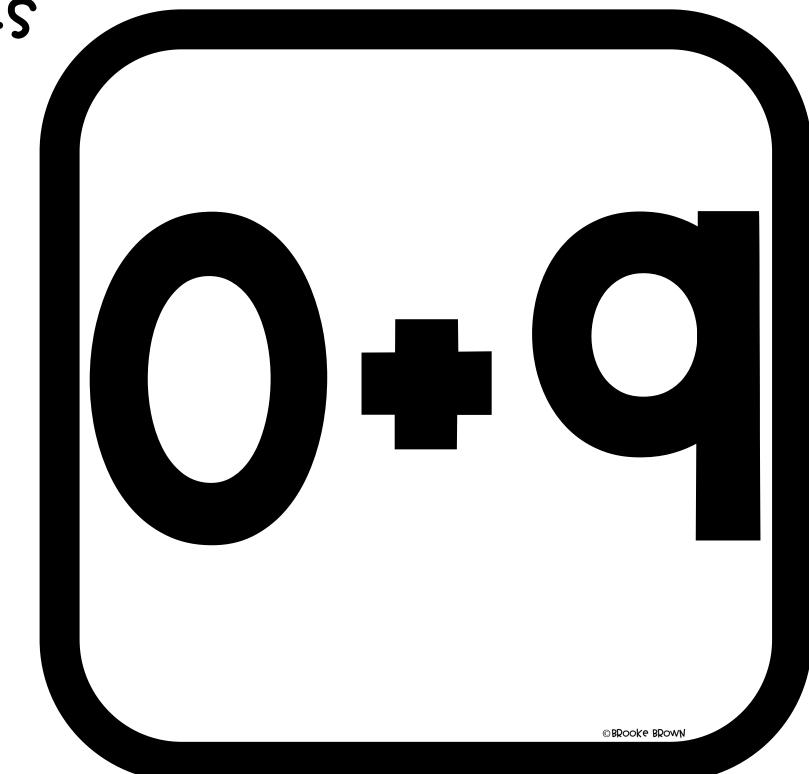
+8 facts ©BRooke BROWN

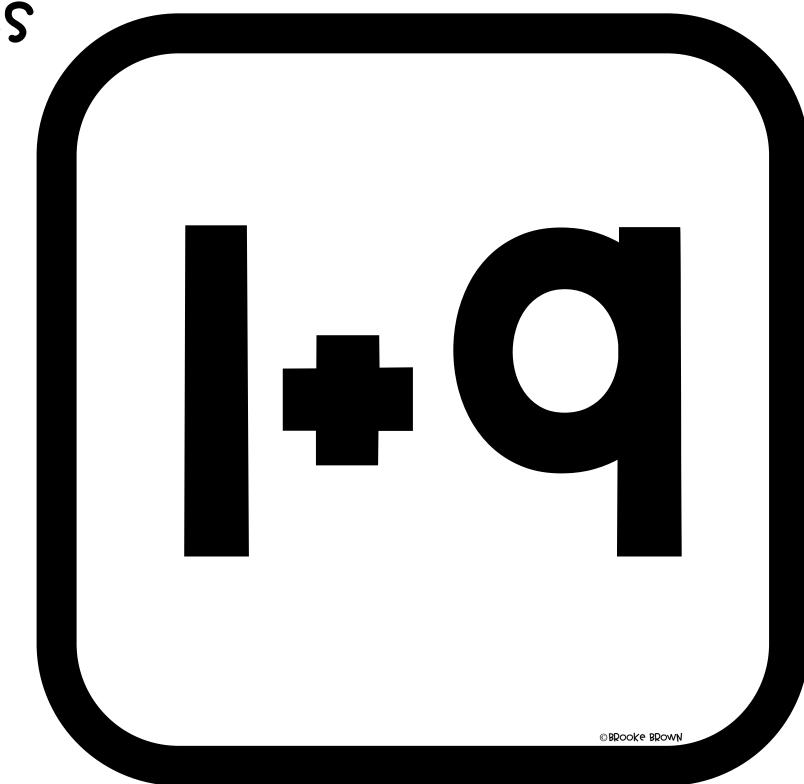


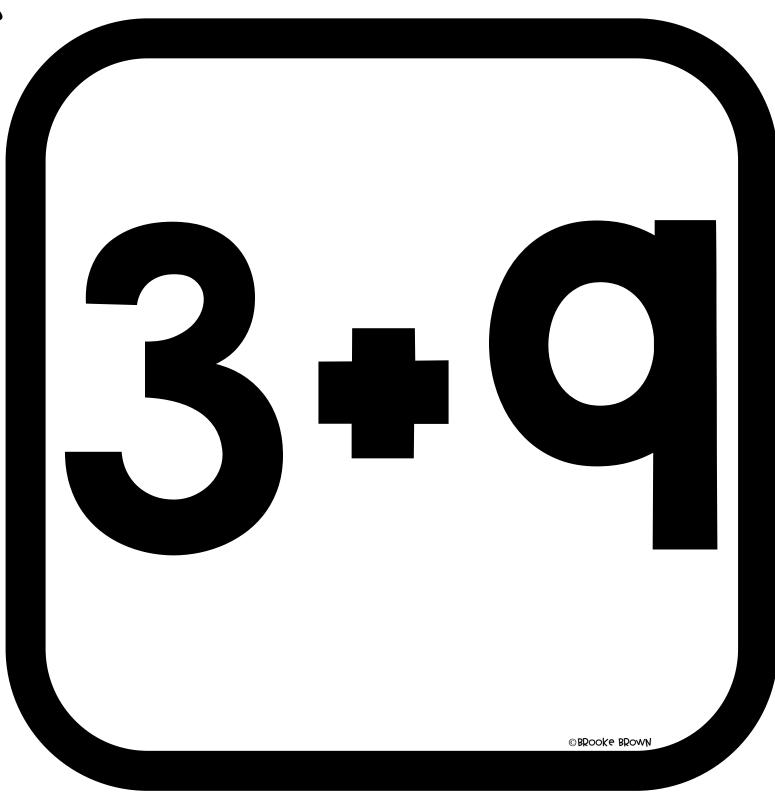
+8 tacts ©BRooke BROWN

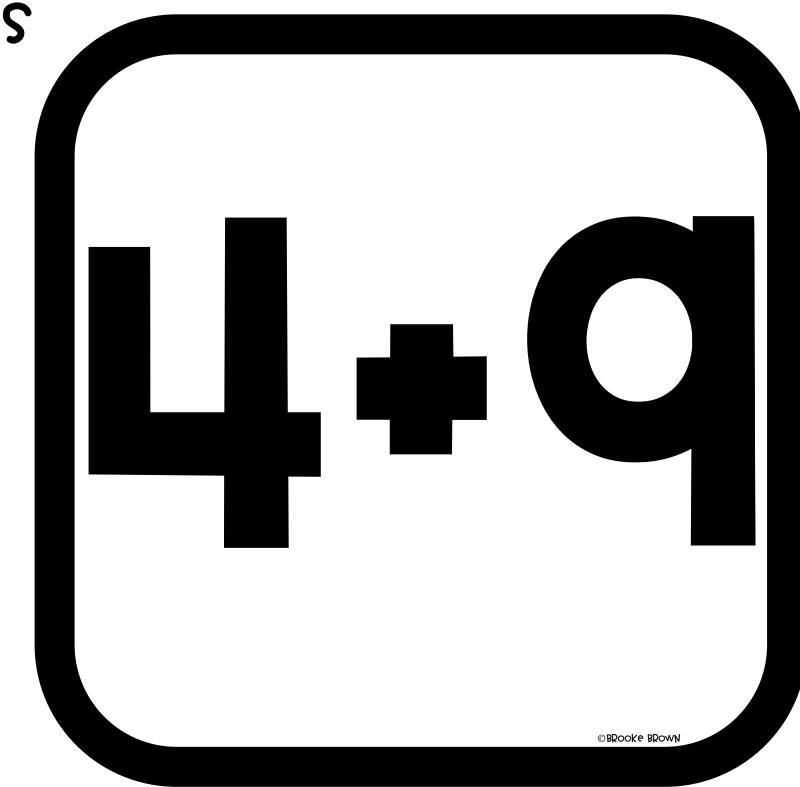


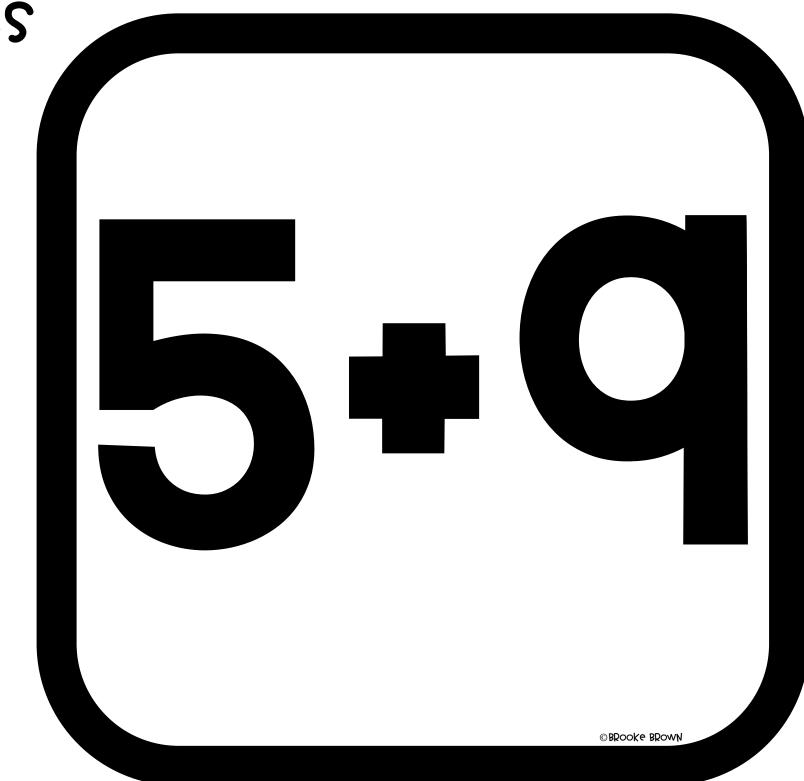


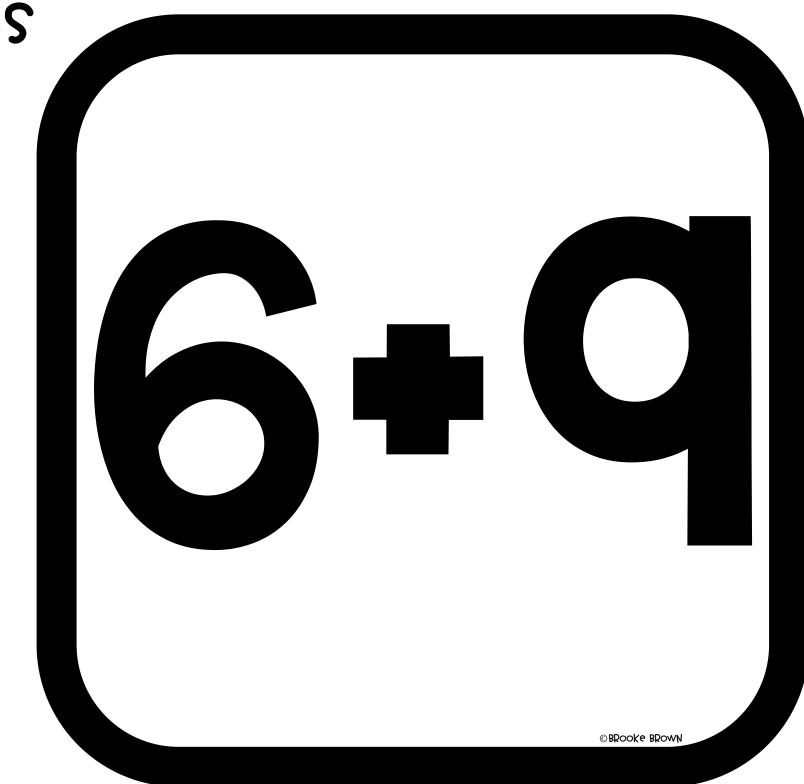


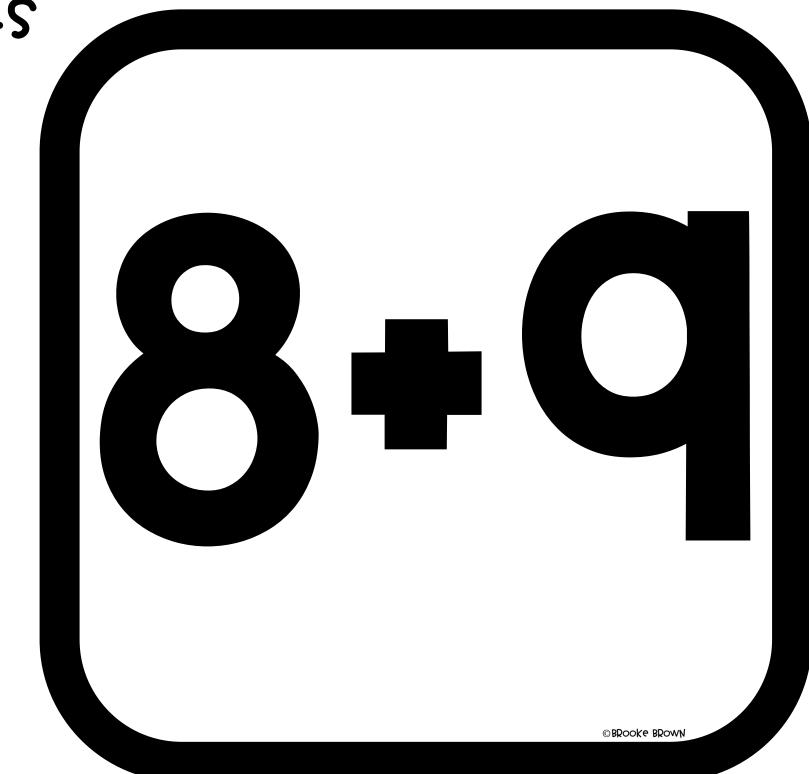


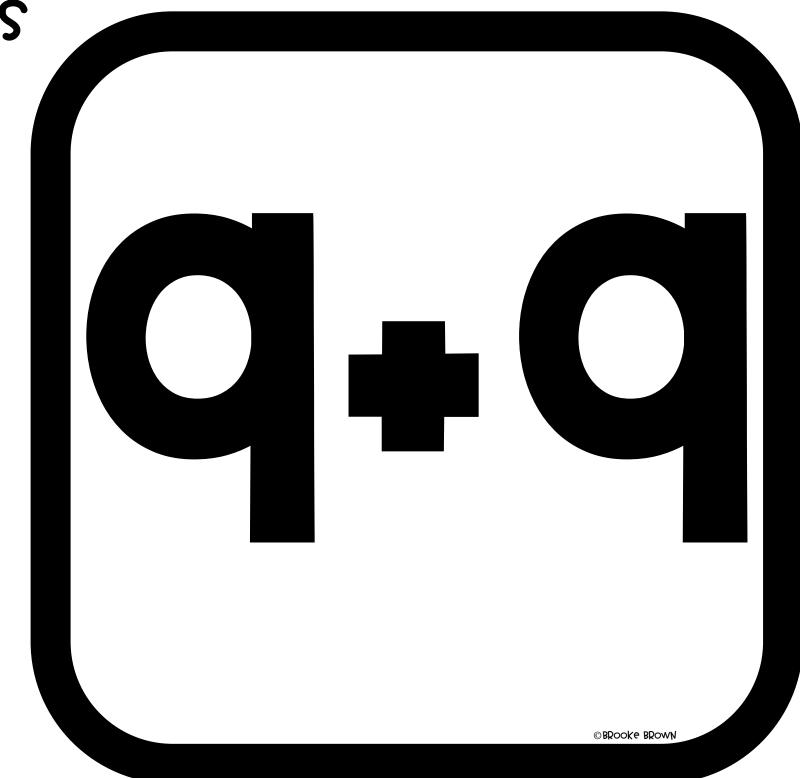


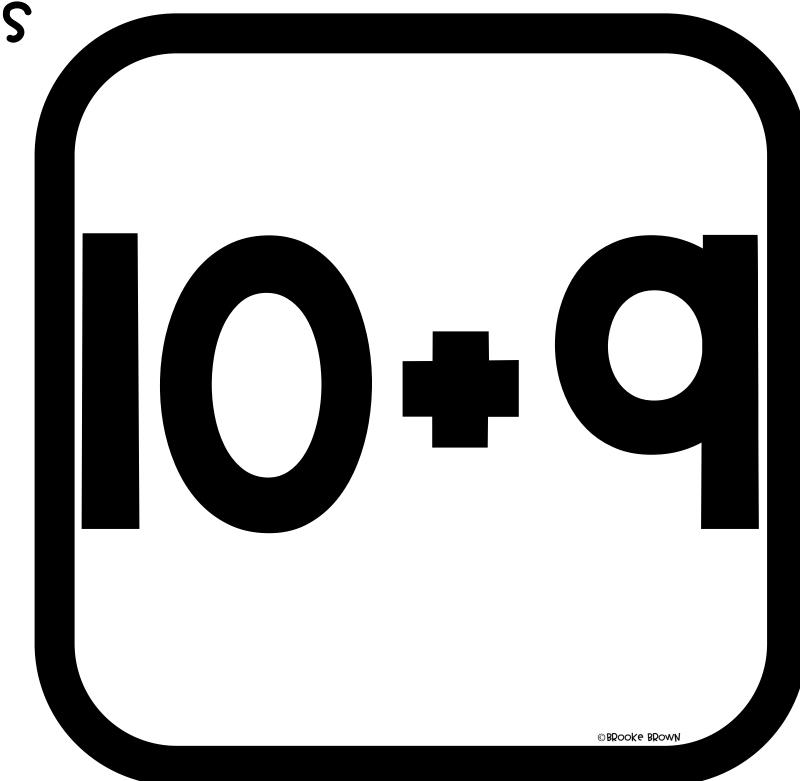


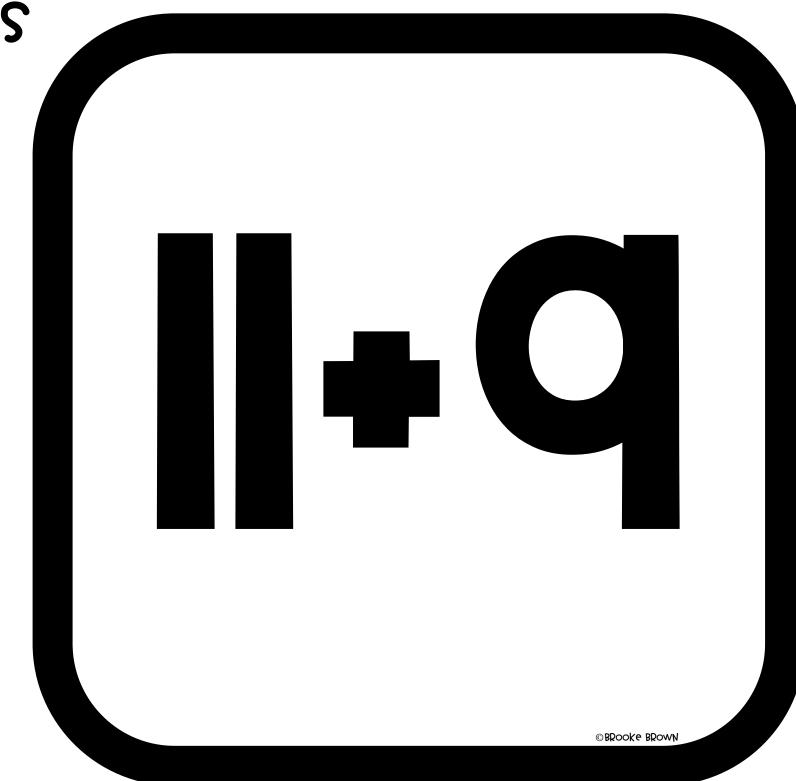


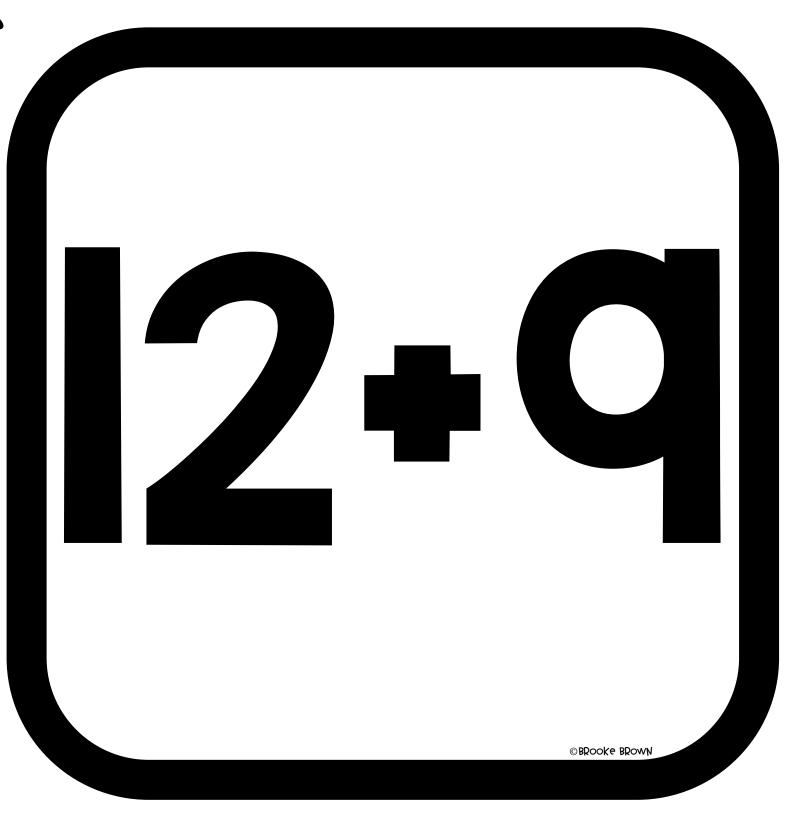






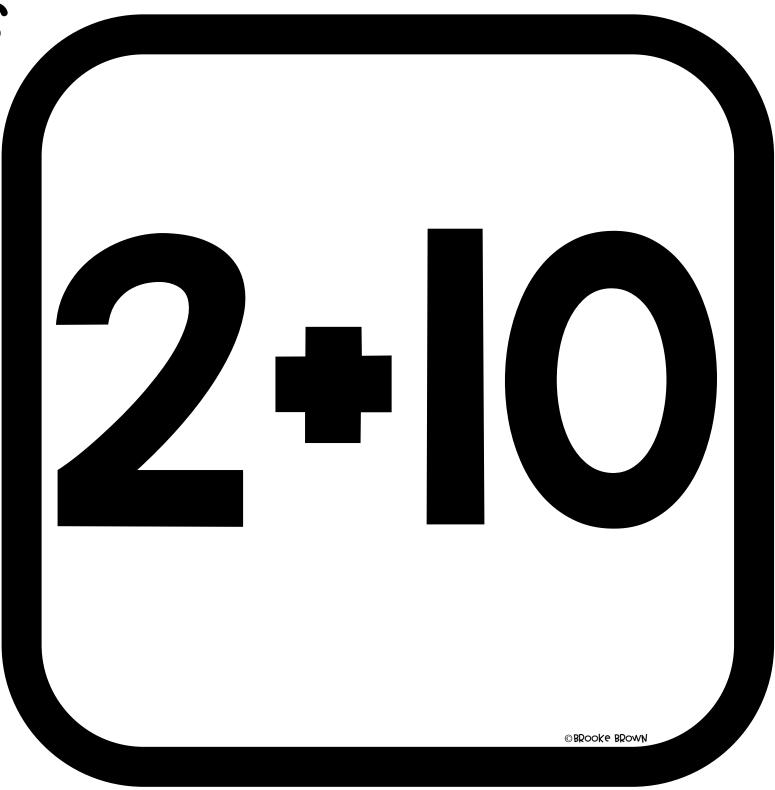


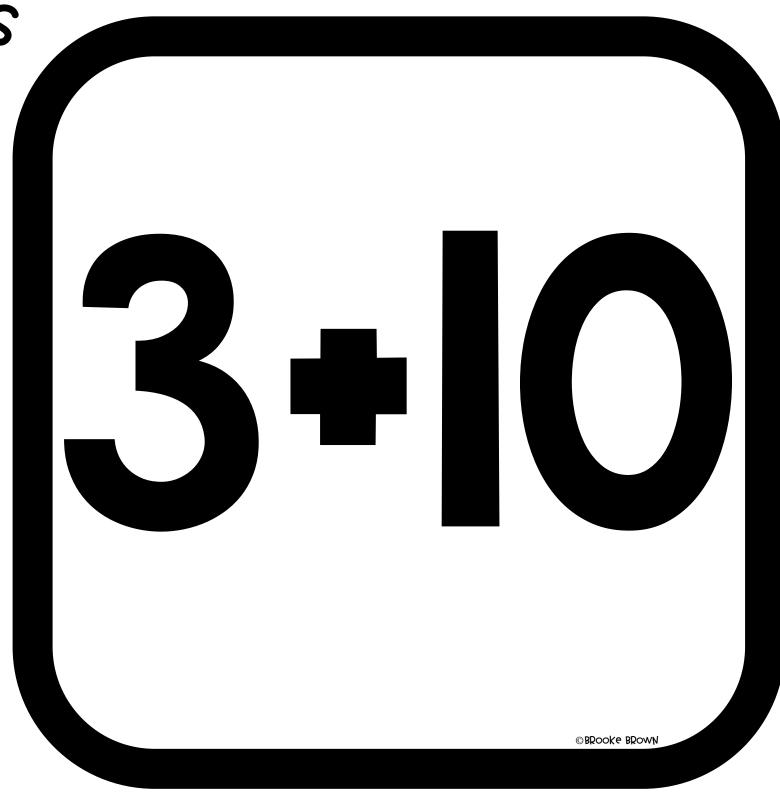




+10 tacts

+10 tacts

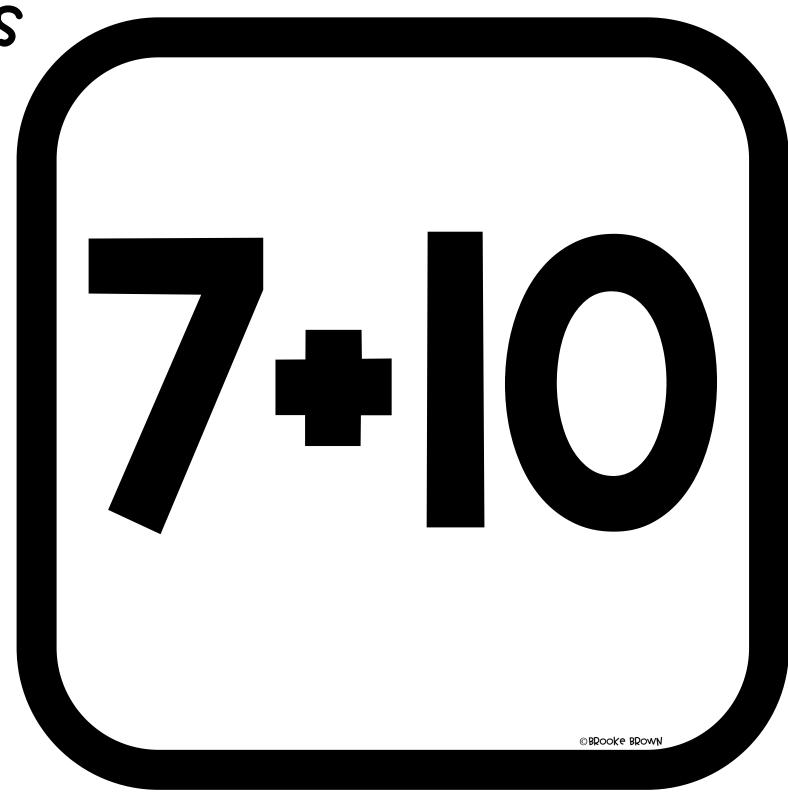




©BRooke BROWN

+10 tacts ©BRooke BROWN

+10 tacts ©BRooke BROWN

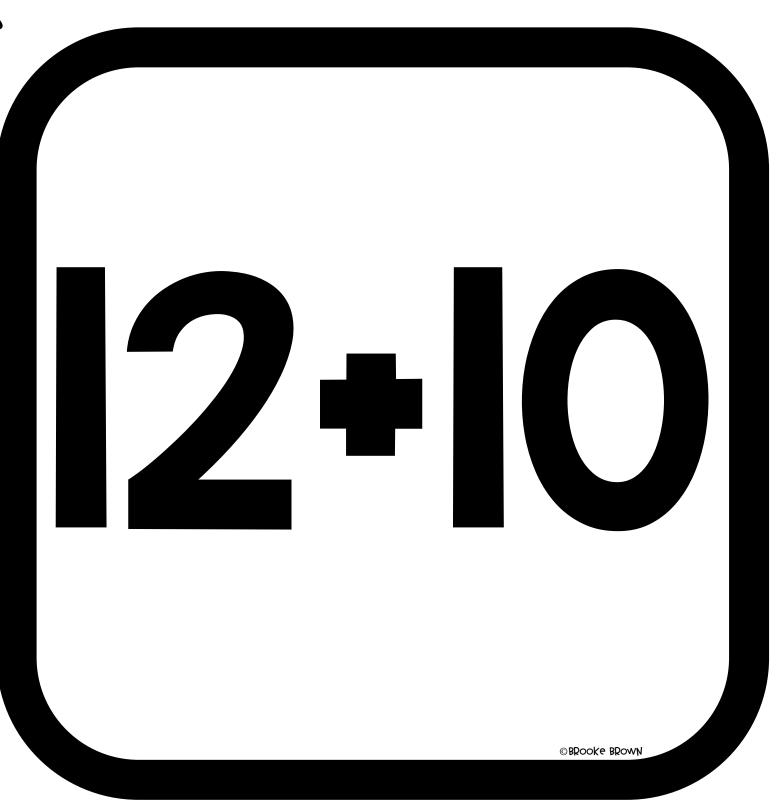


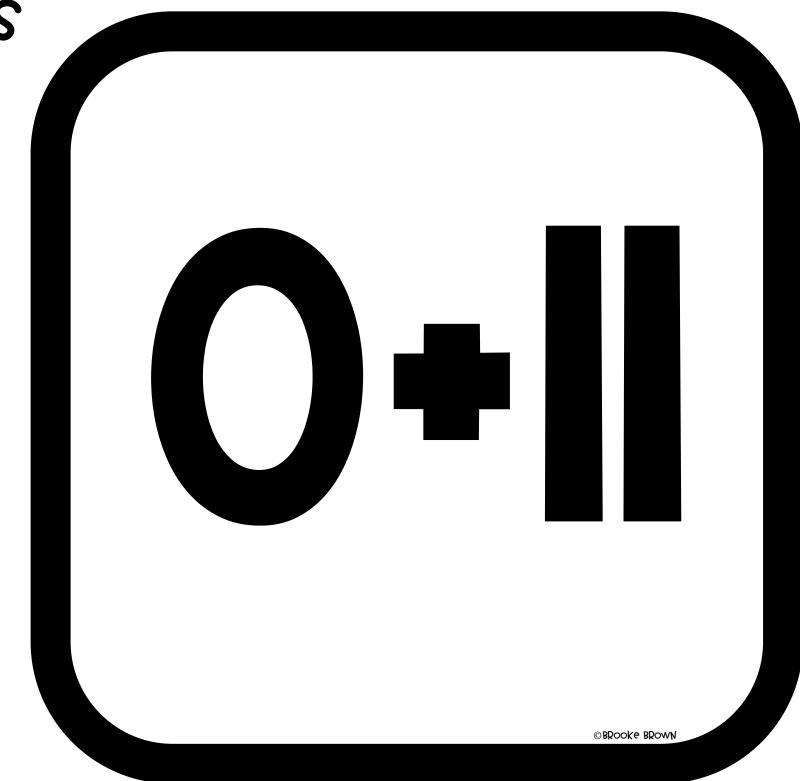
©BRooke BROWN

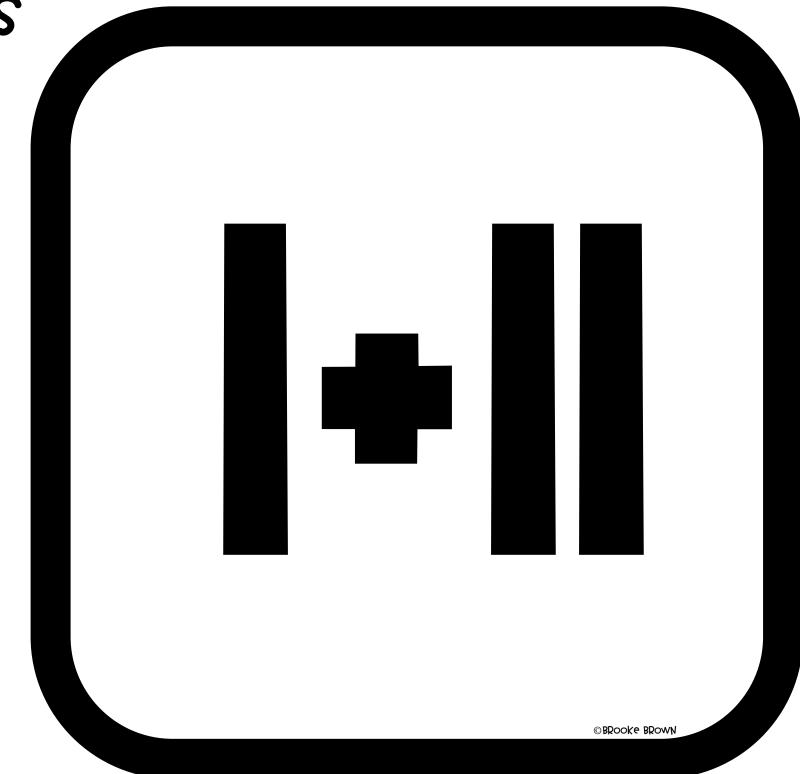
©BRooke BROWN

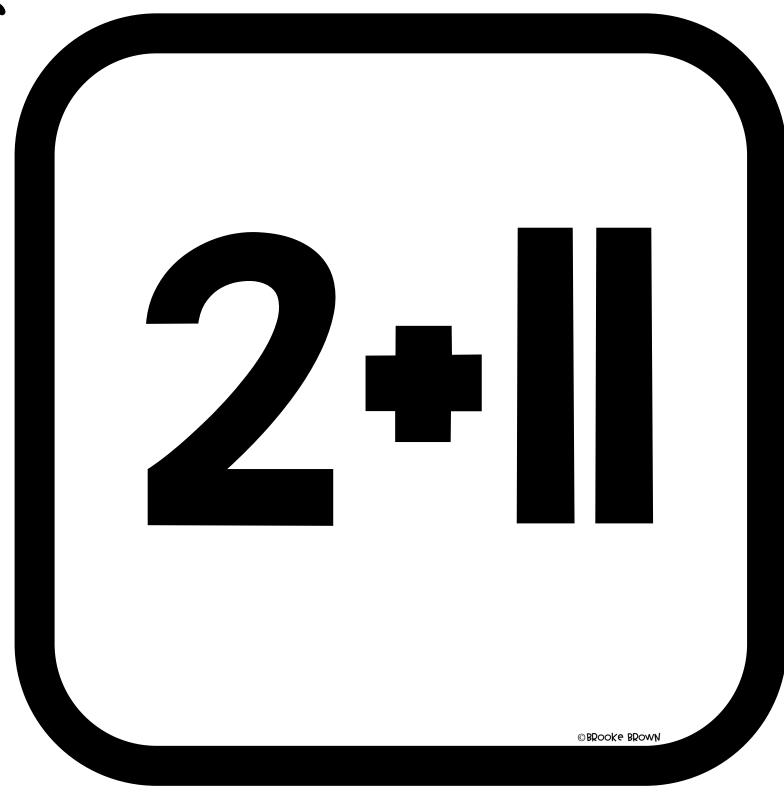
© BRooke BROWN

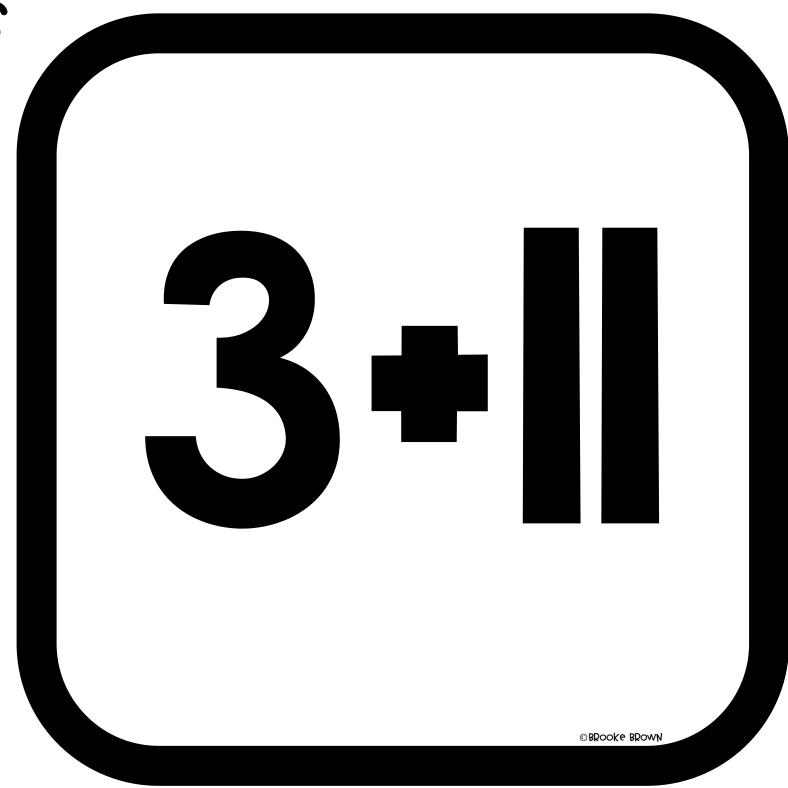
© BRooke BROWN

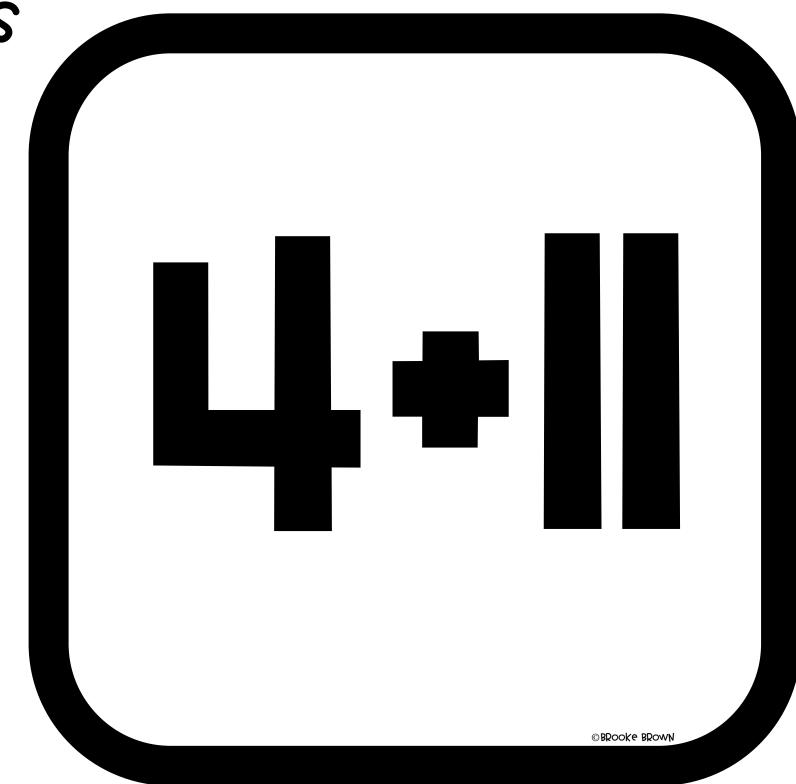


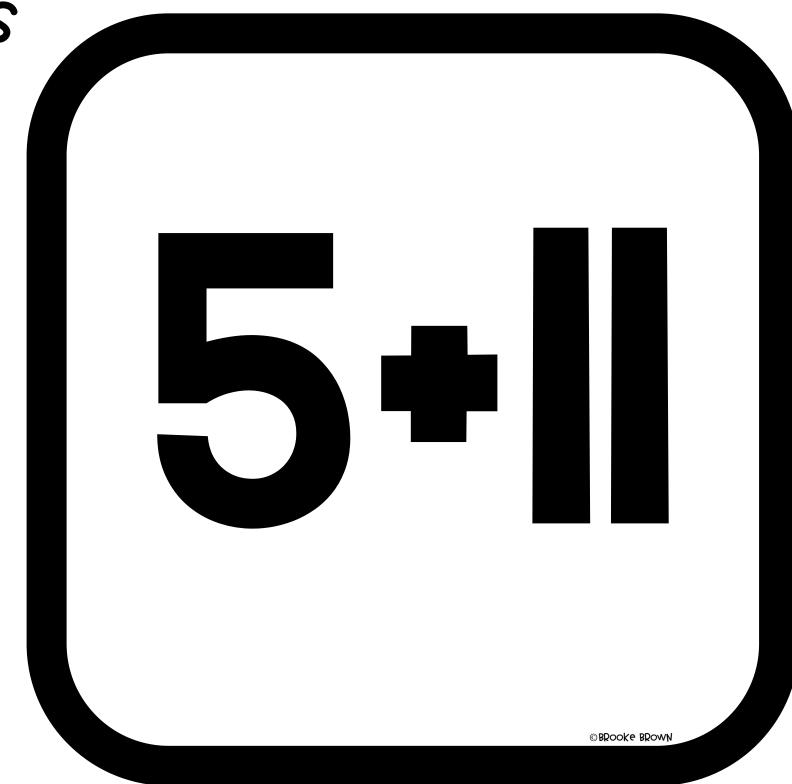


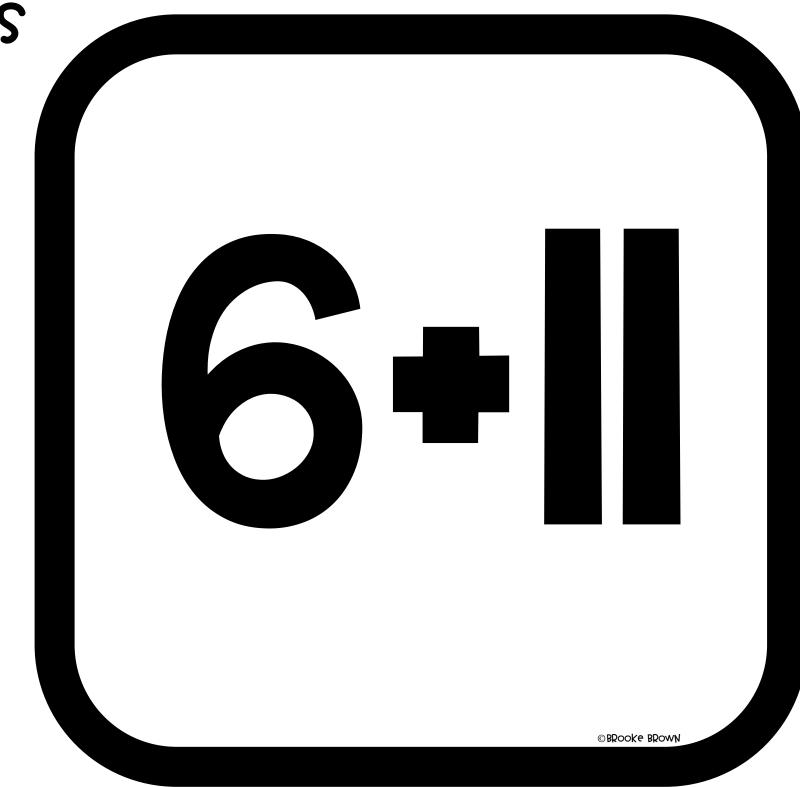


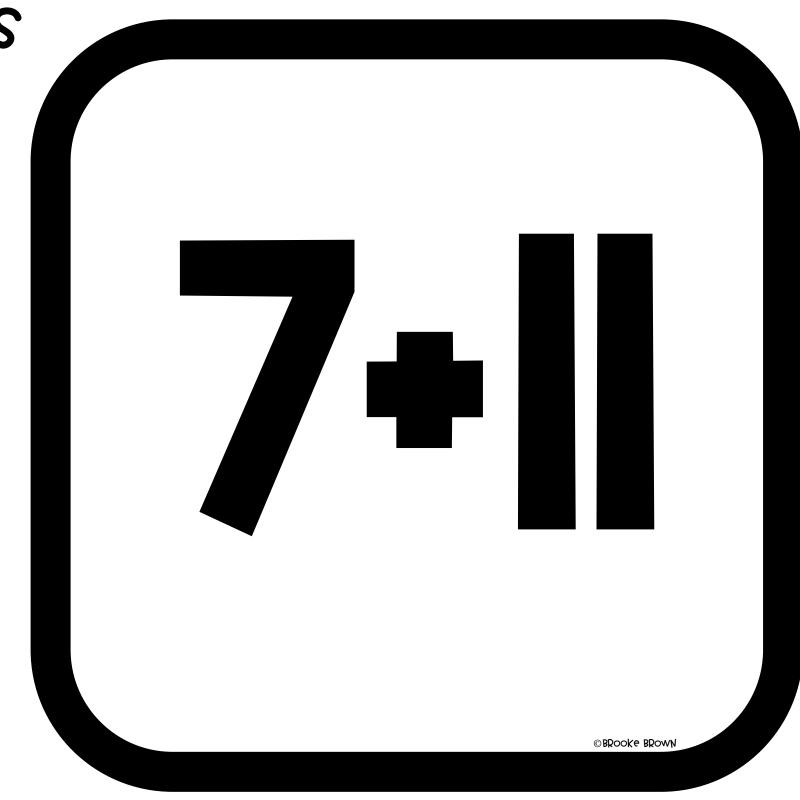


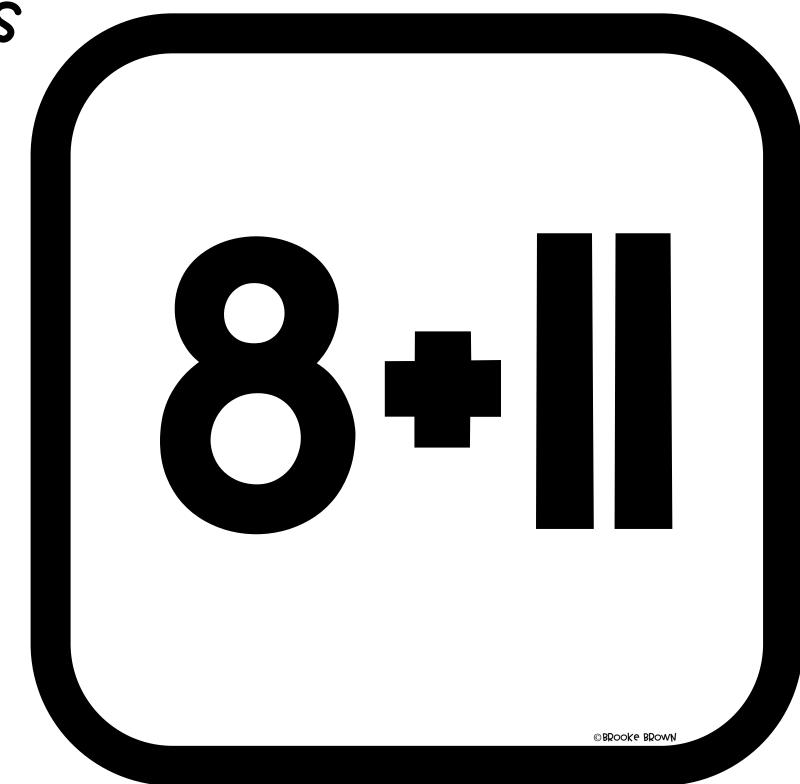


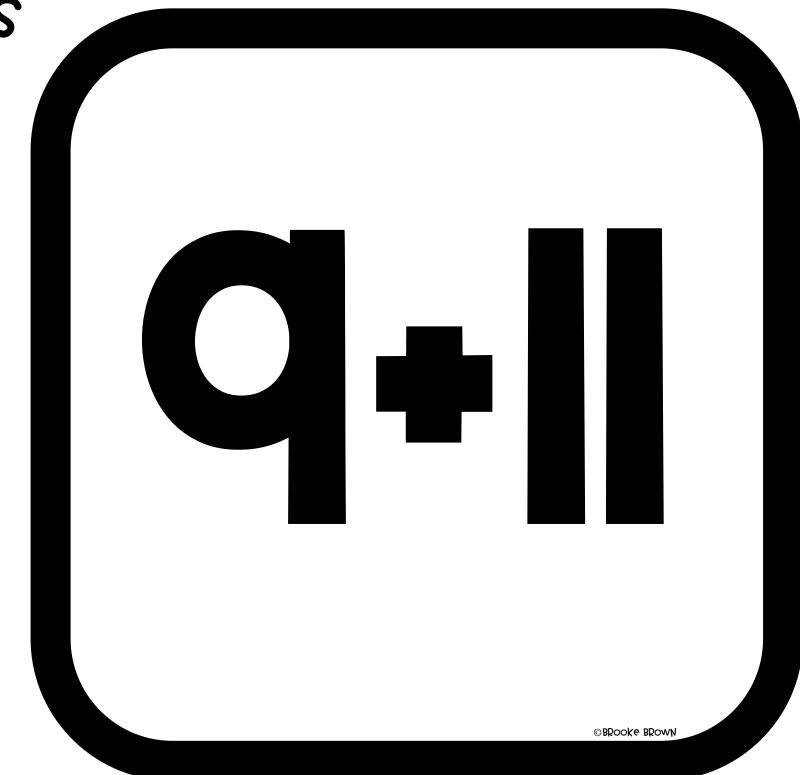


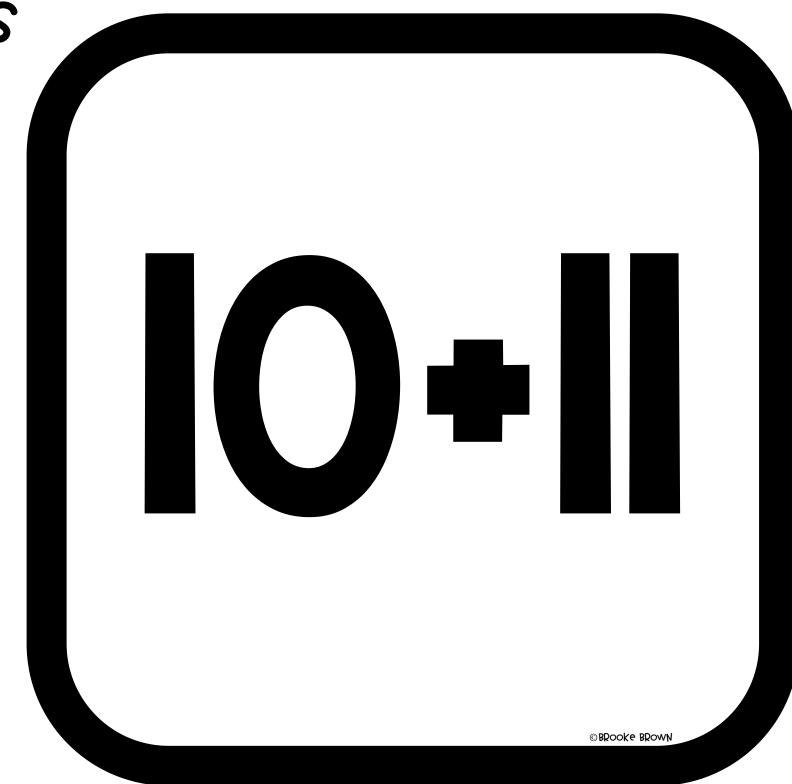


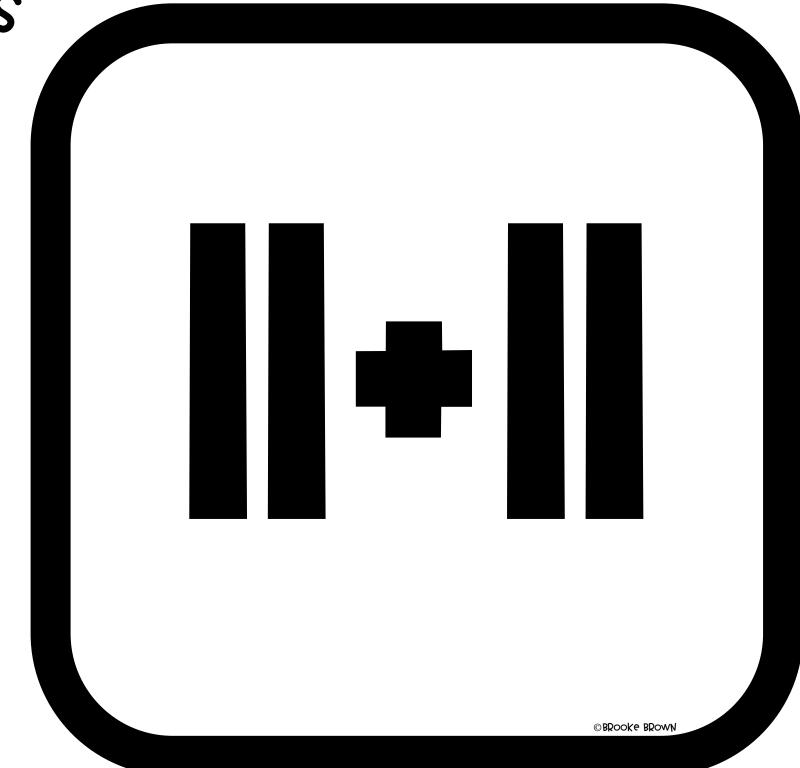


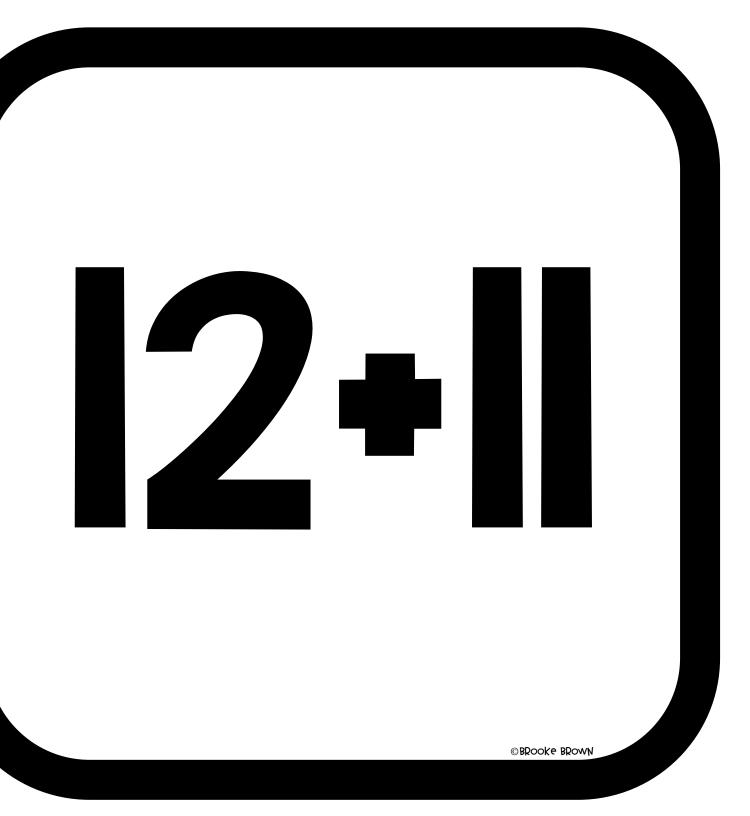


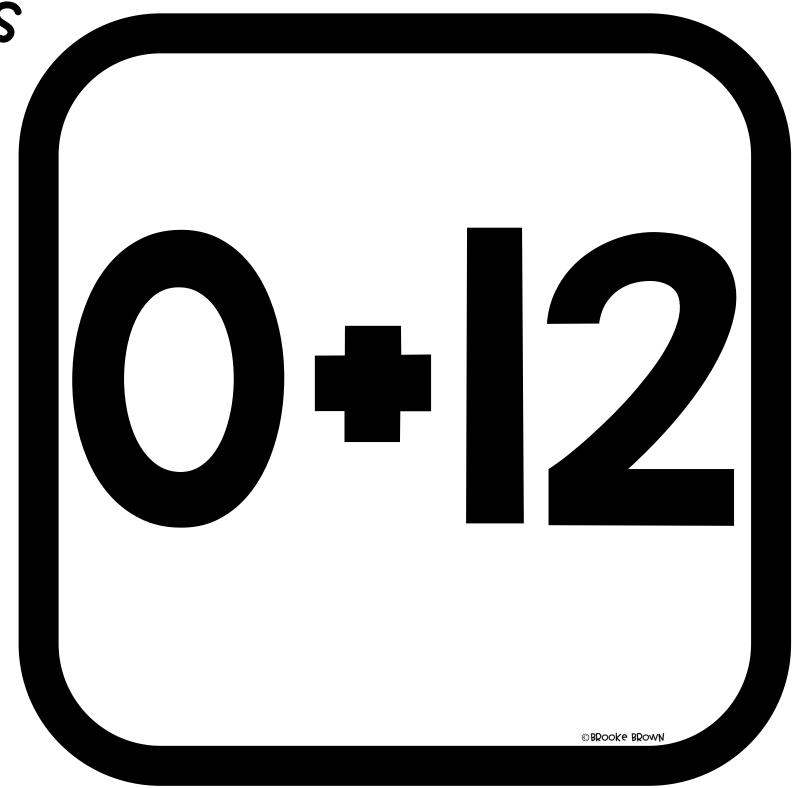


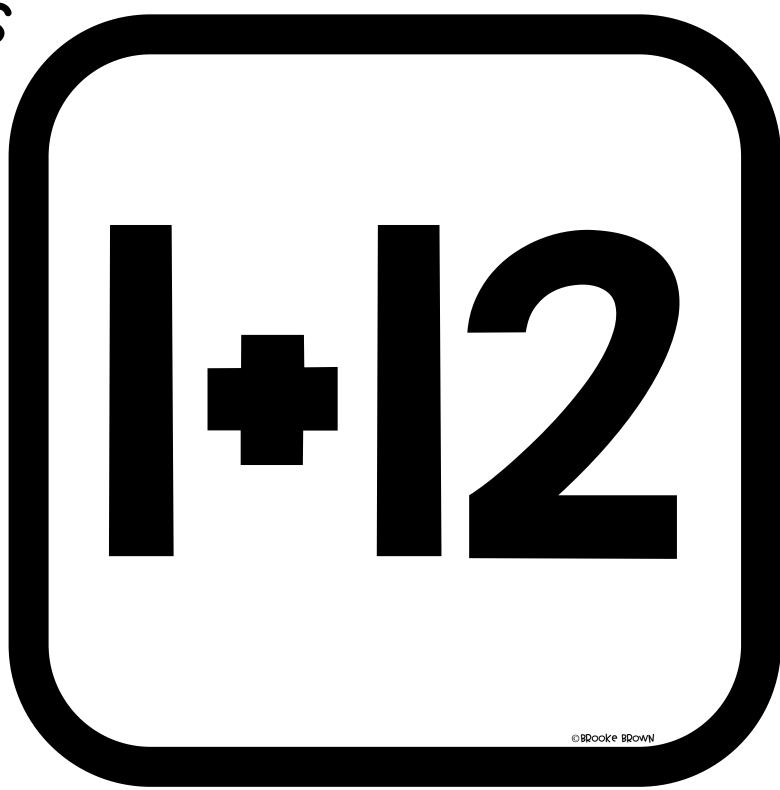


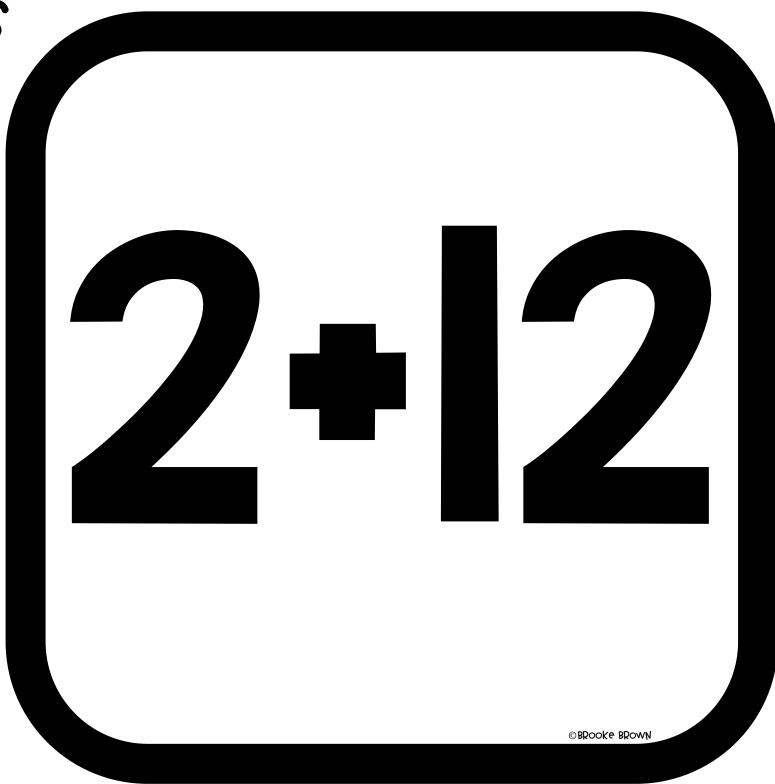


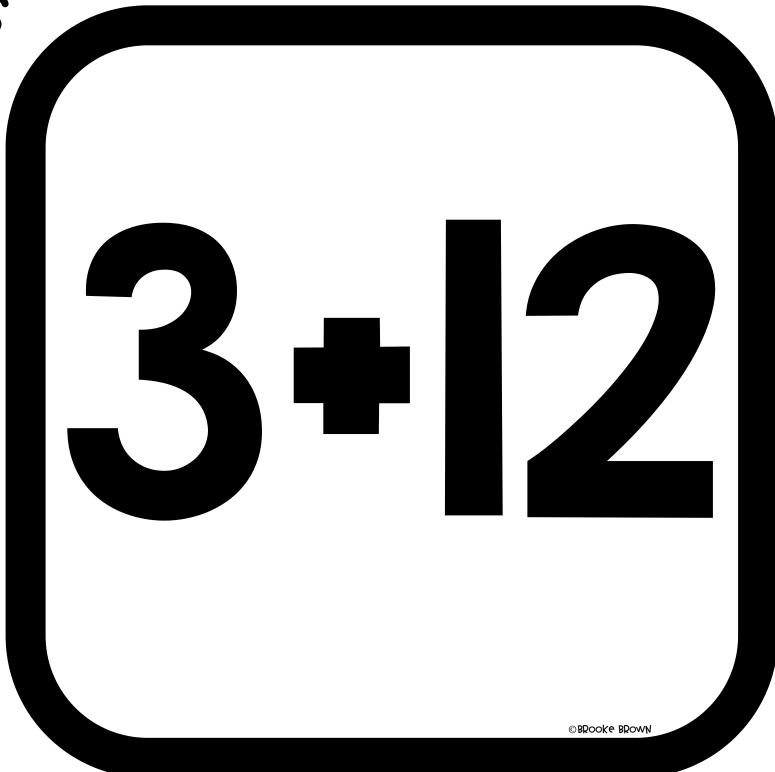


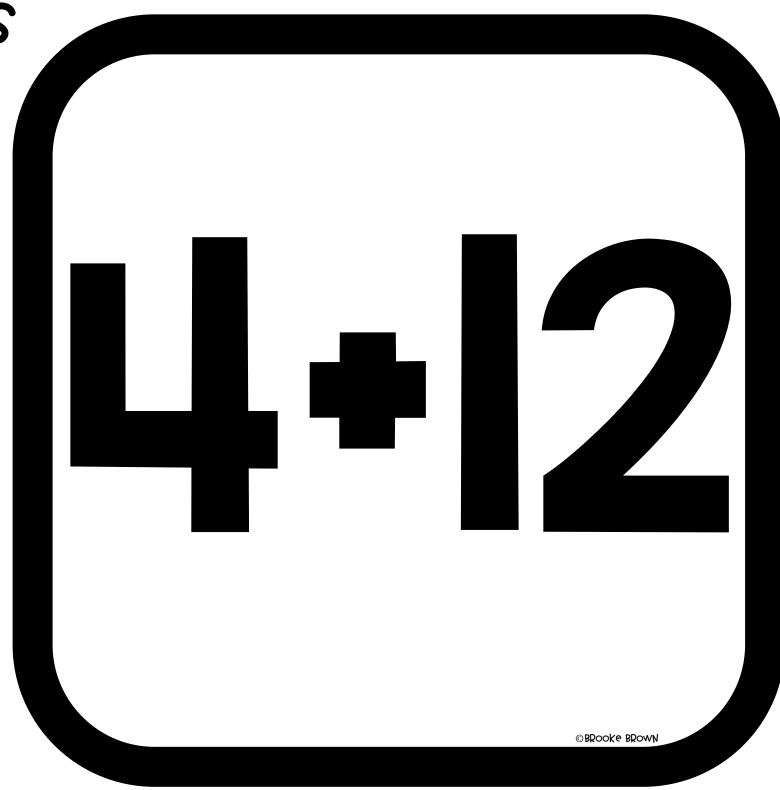


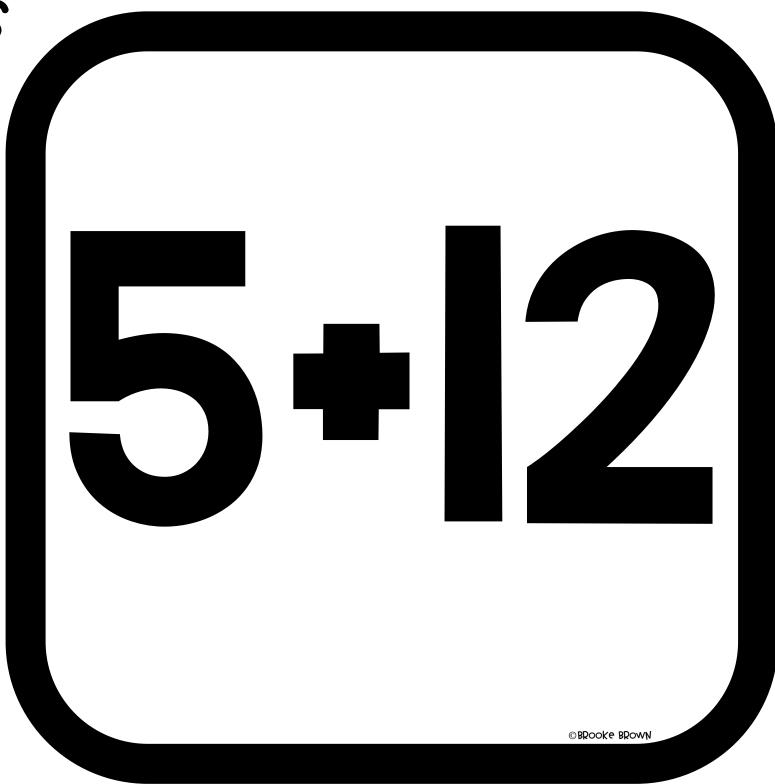


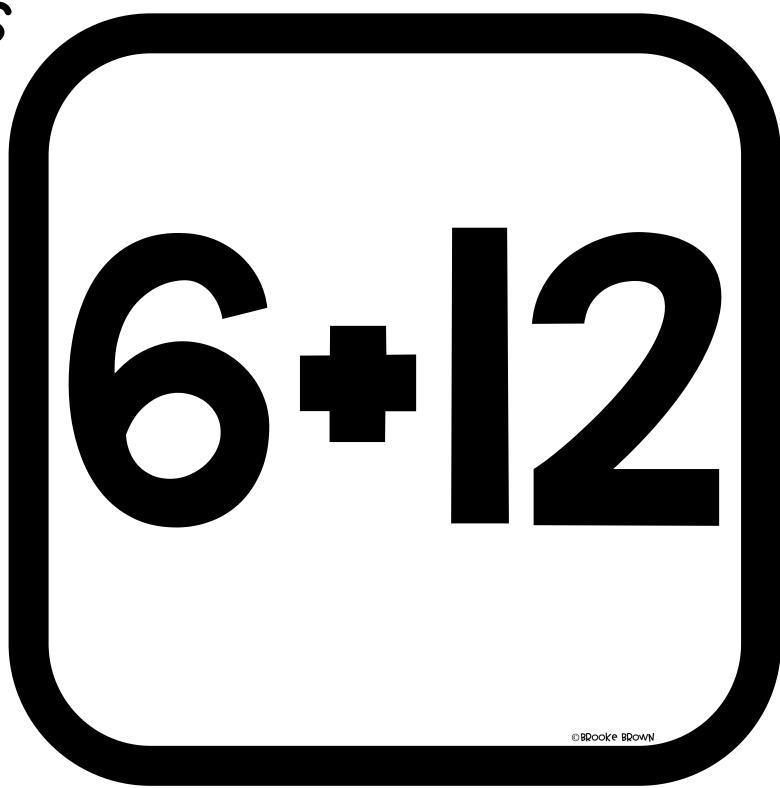


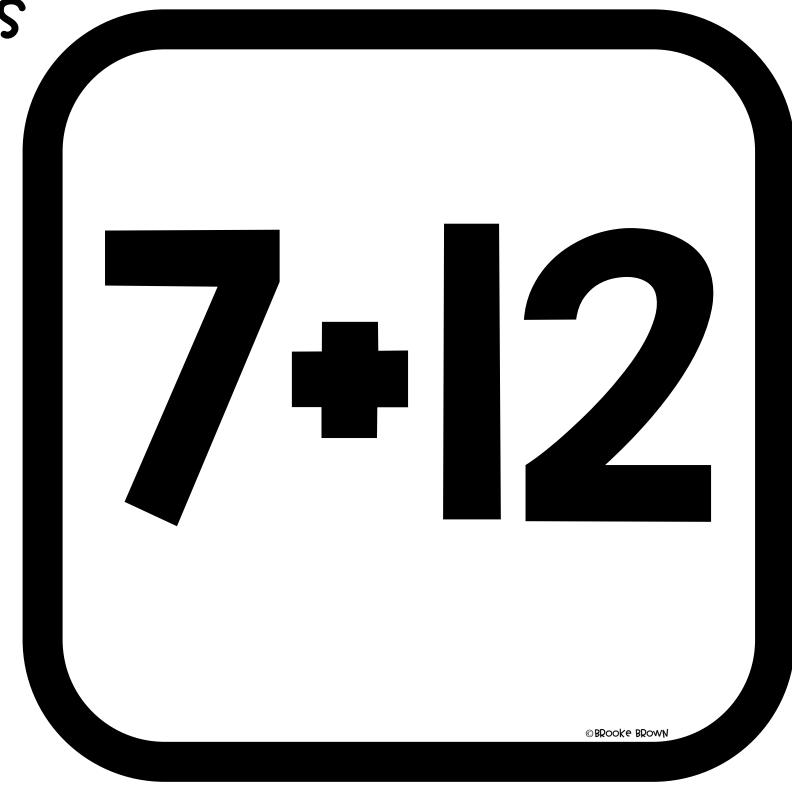


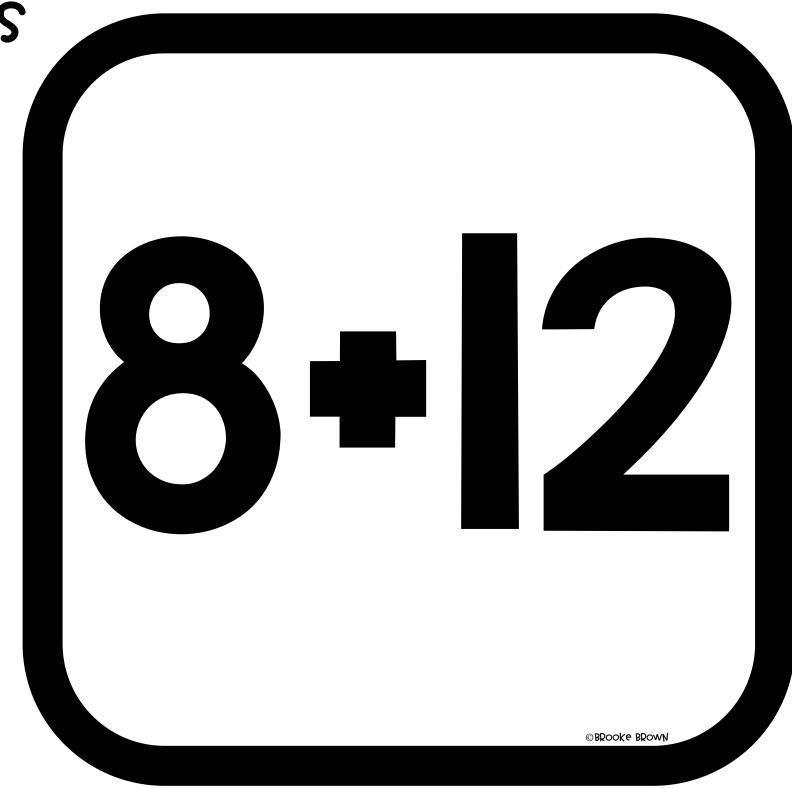


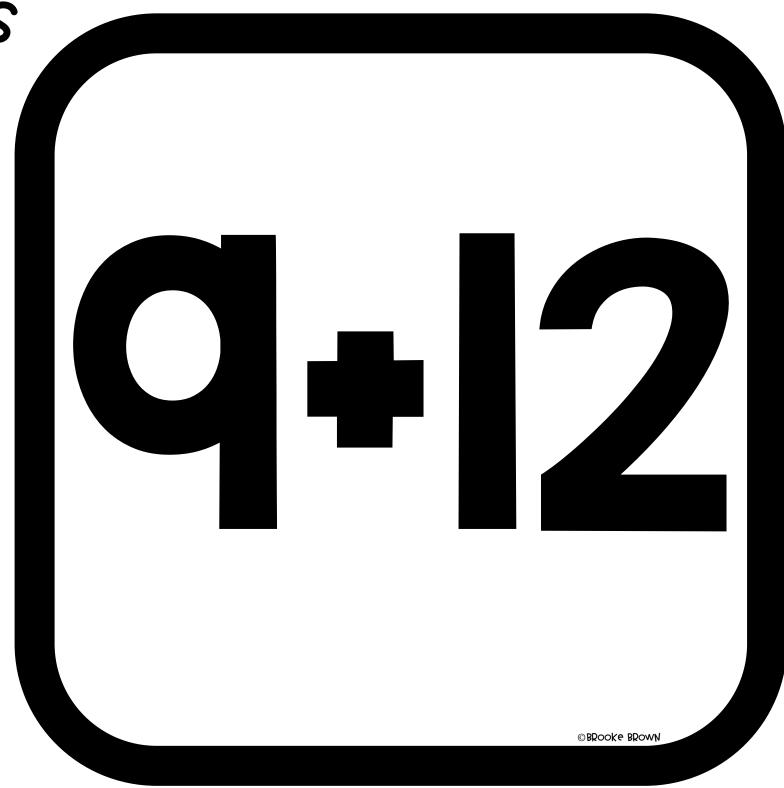


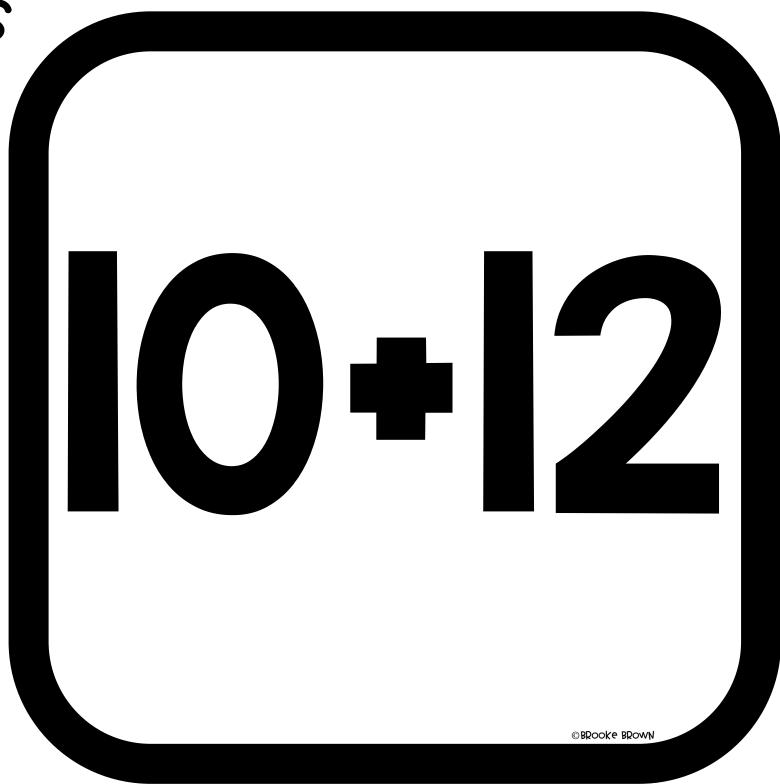


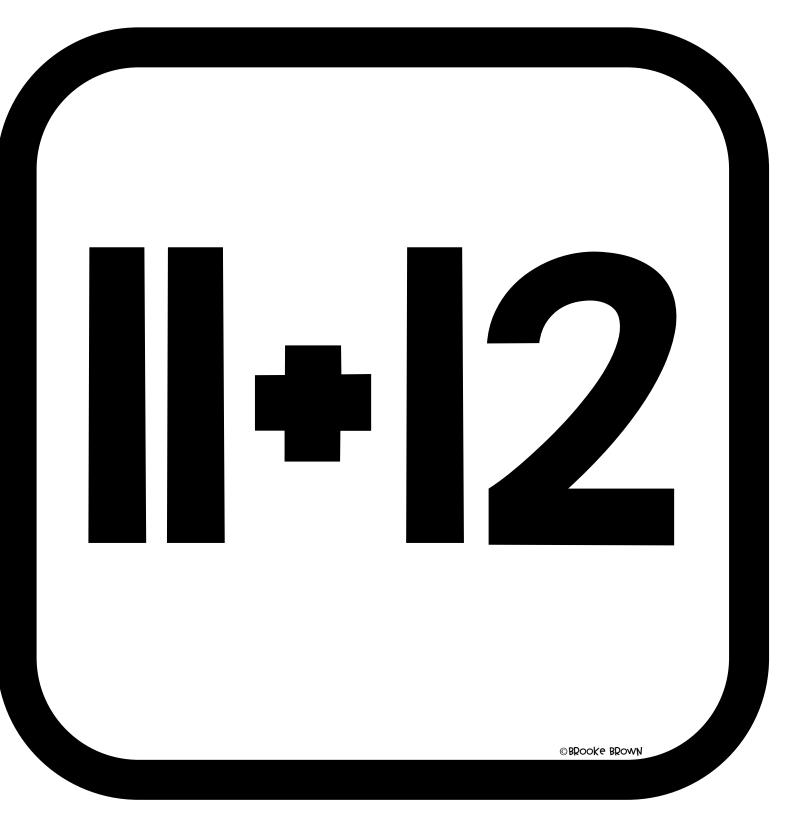




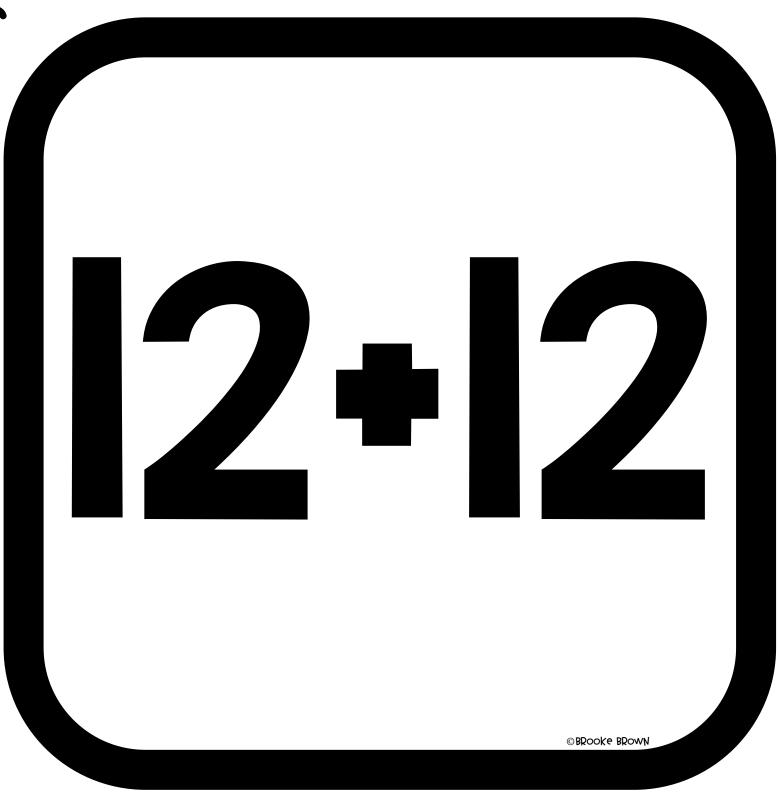


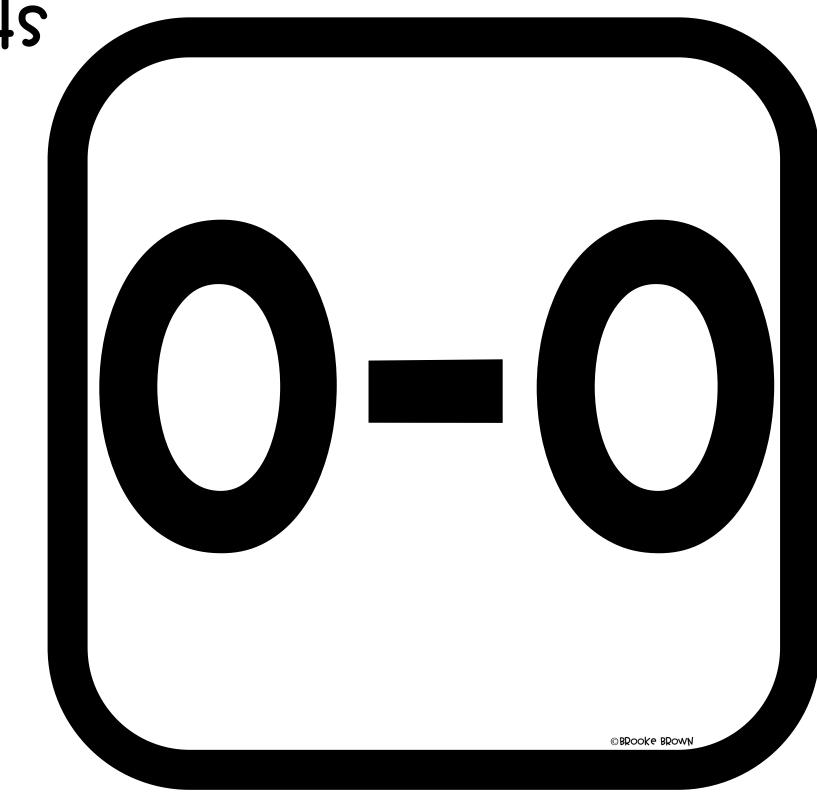






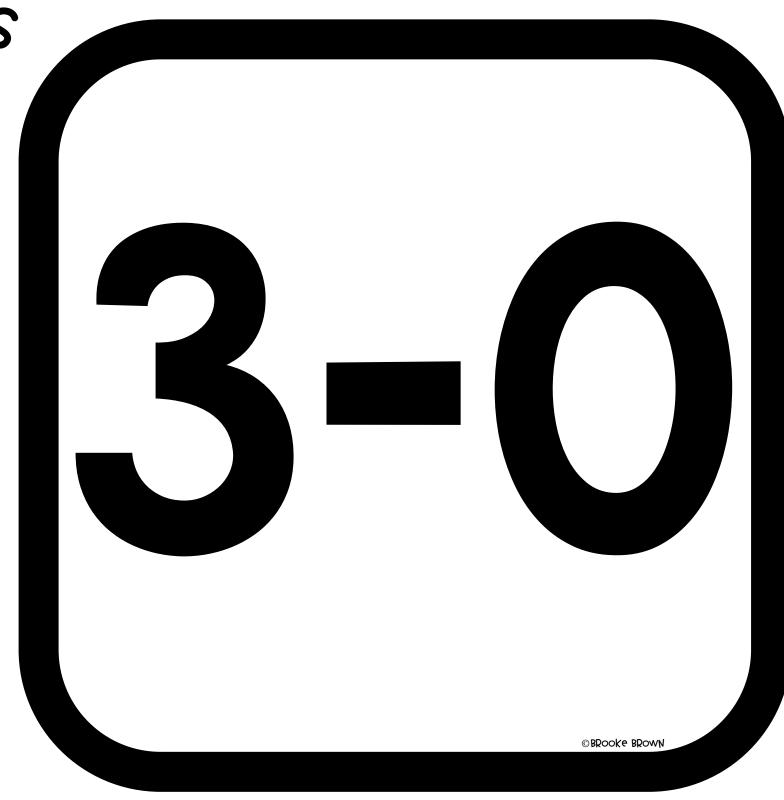
+12 facts

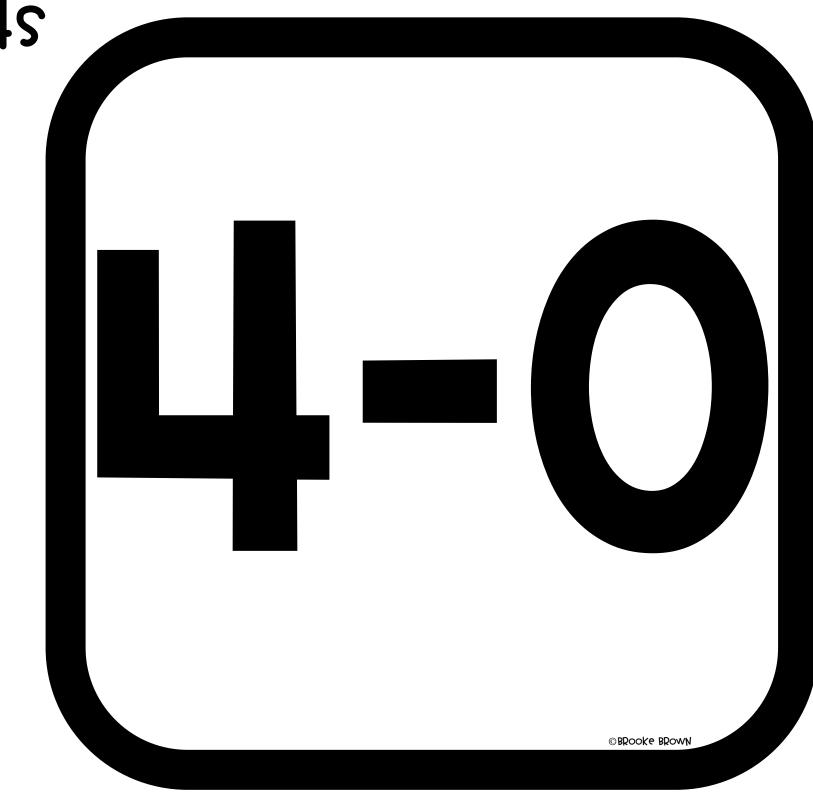




©BRooke BROWN

-O tacts ©BRooke BROWN

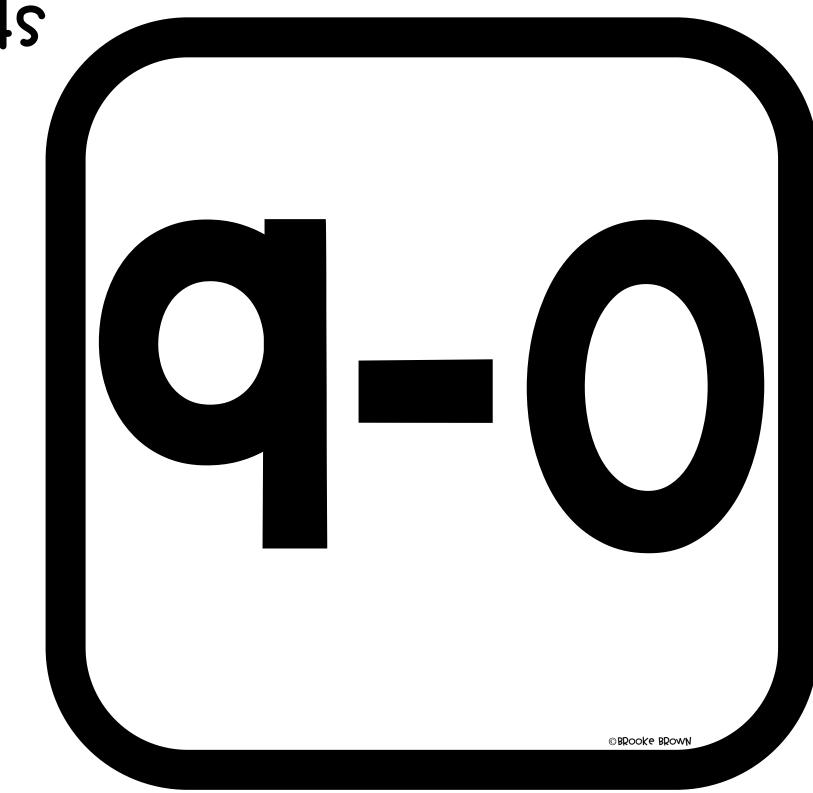


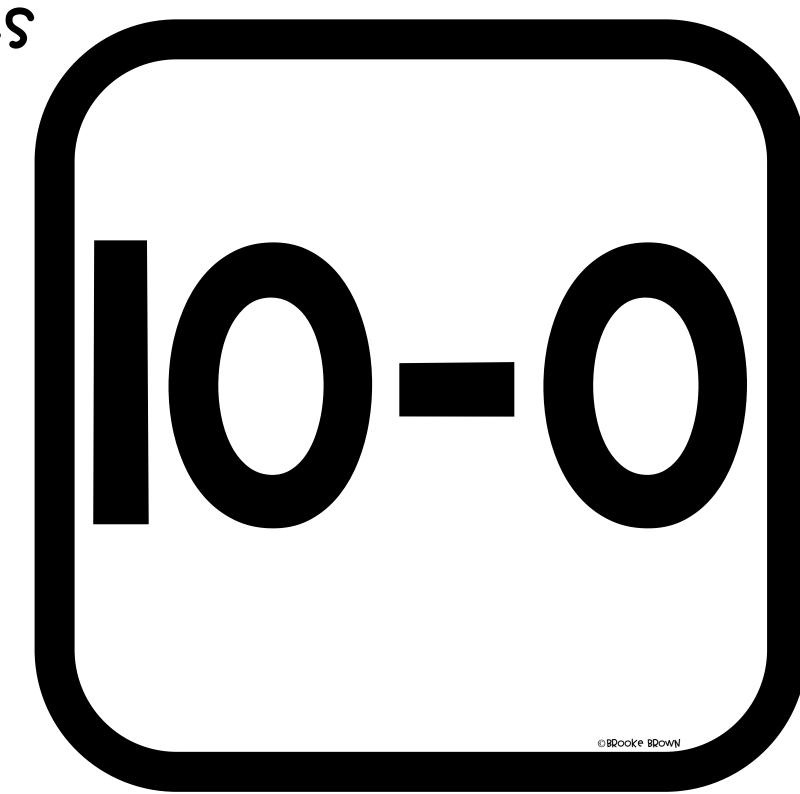


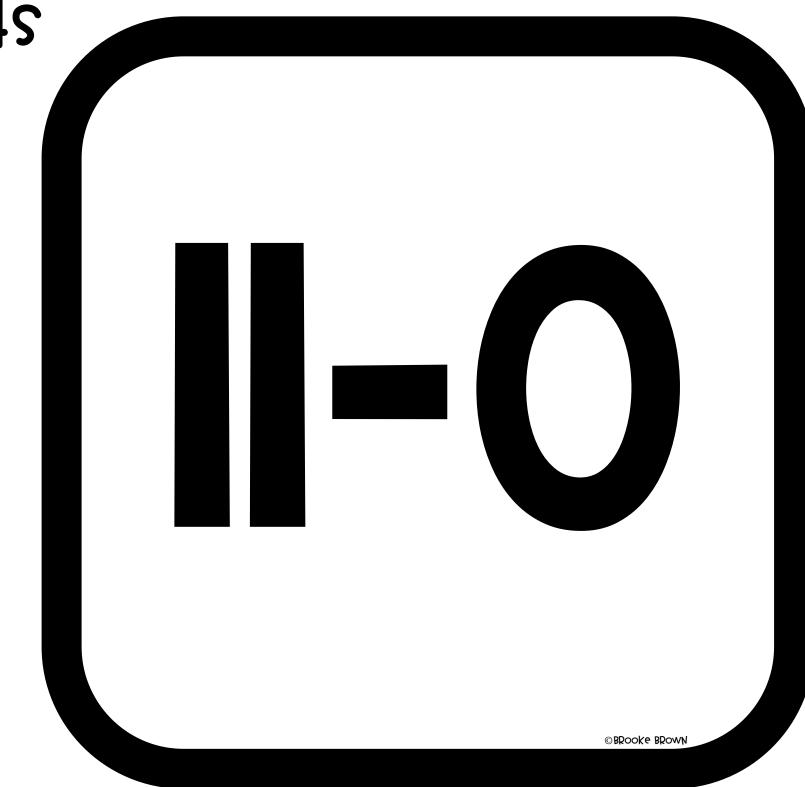
©BRooke BROWN

©BRooke BROWN

-O tacts ©BRooke BROWN ©BRooke BROWN





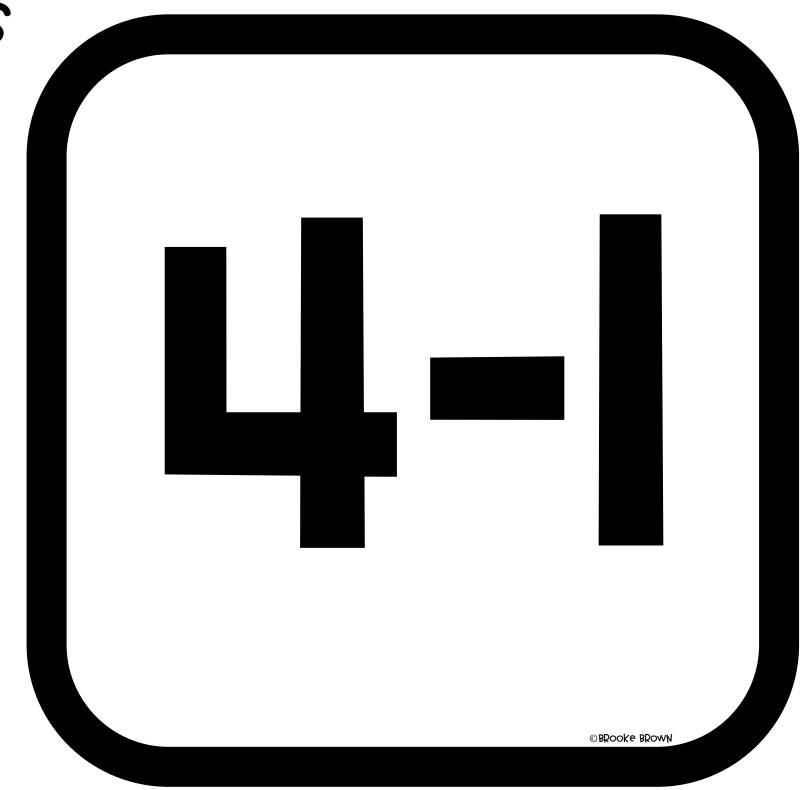




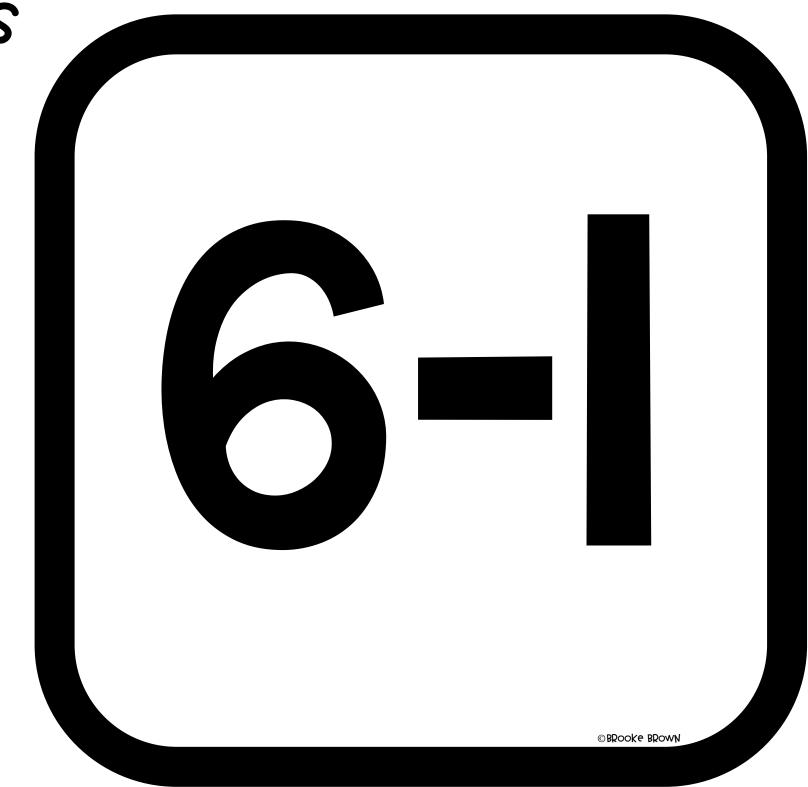
©BRooke BROWN





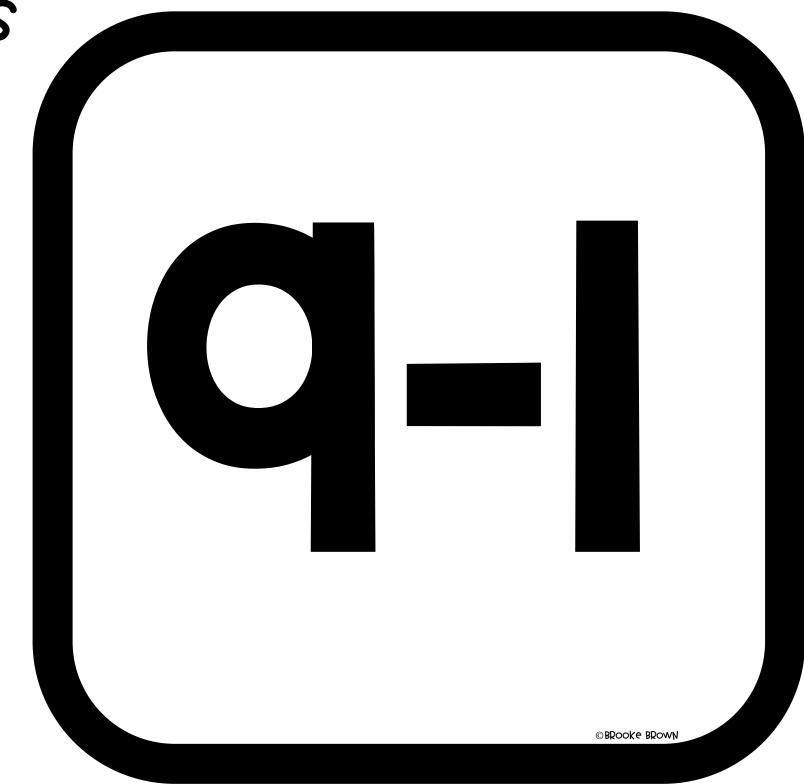


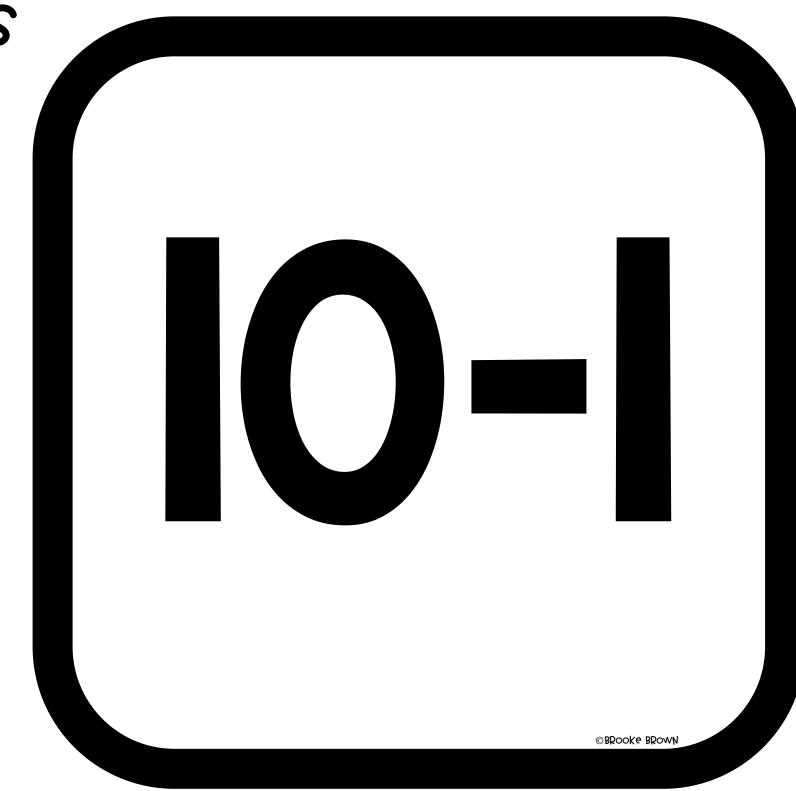


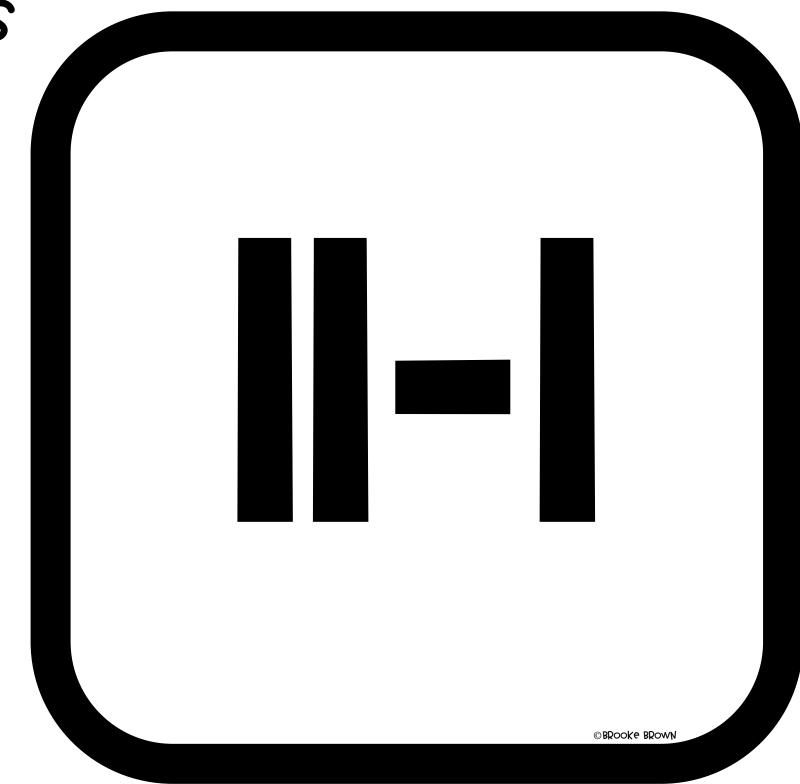


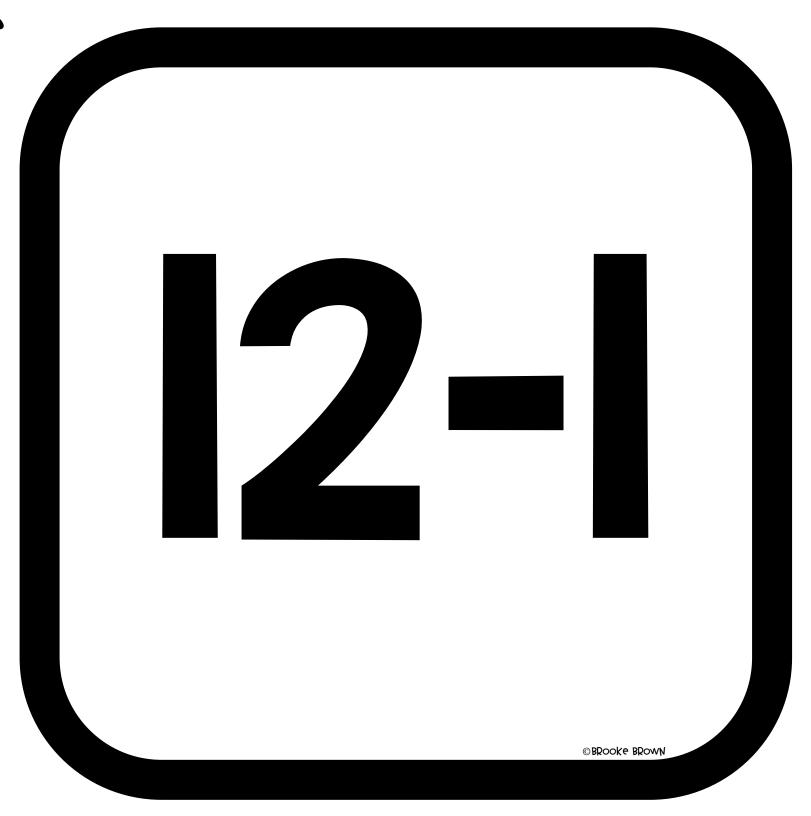
©BRooke BROWN









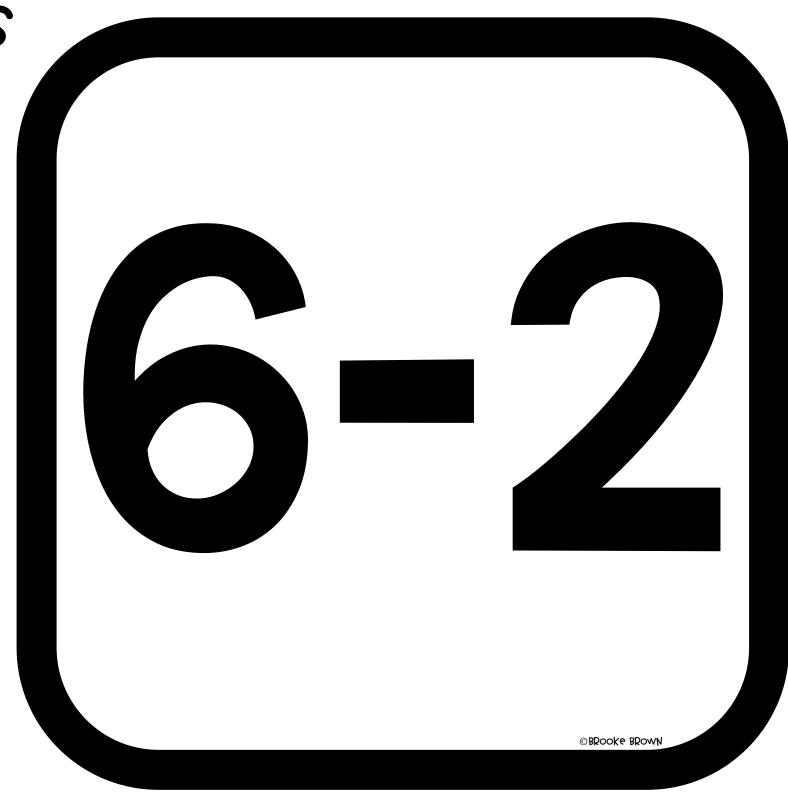




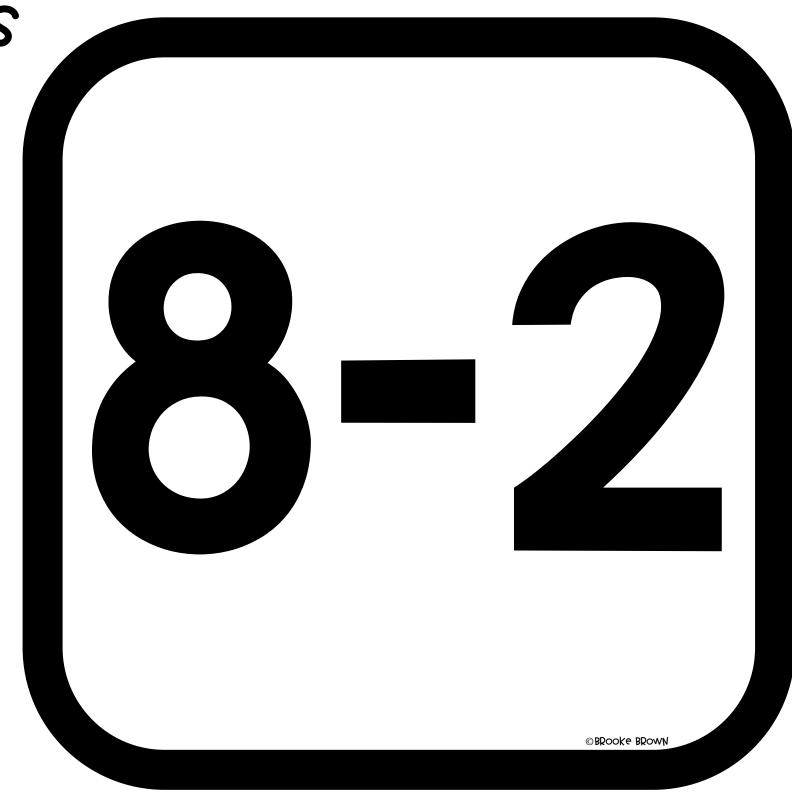












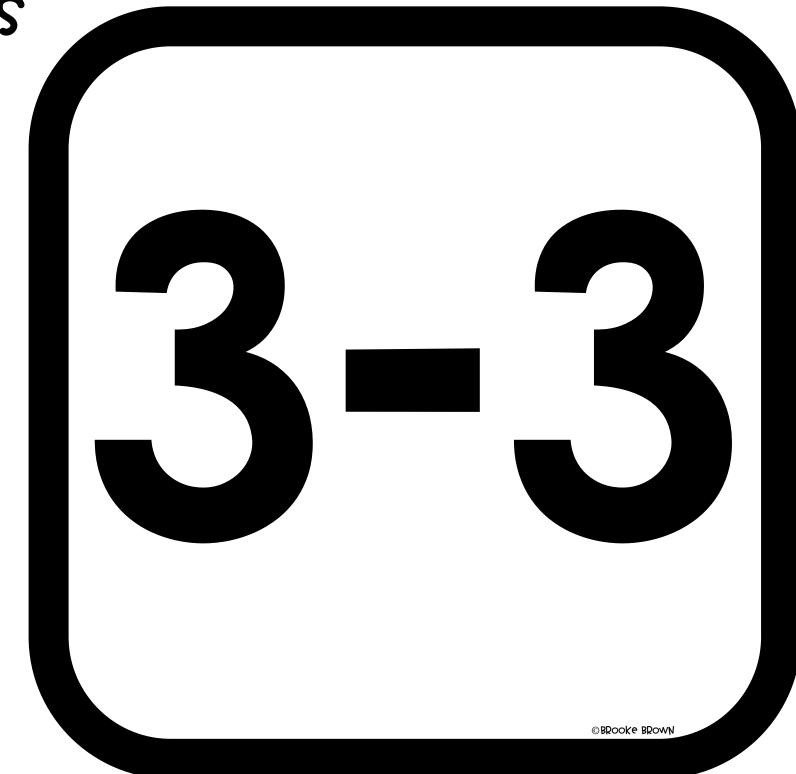






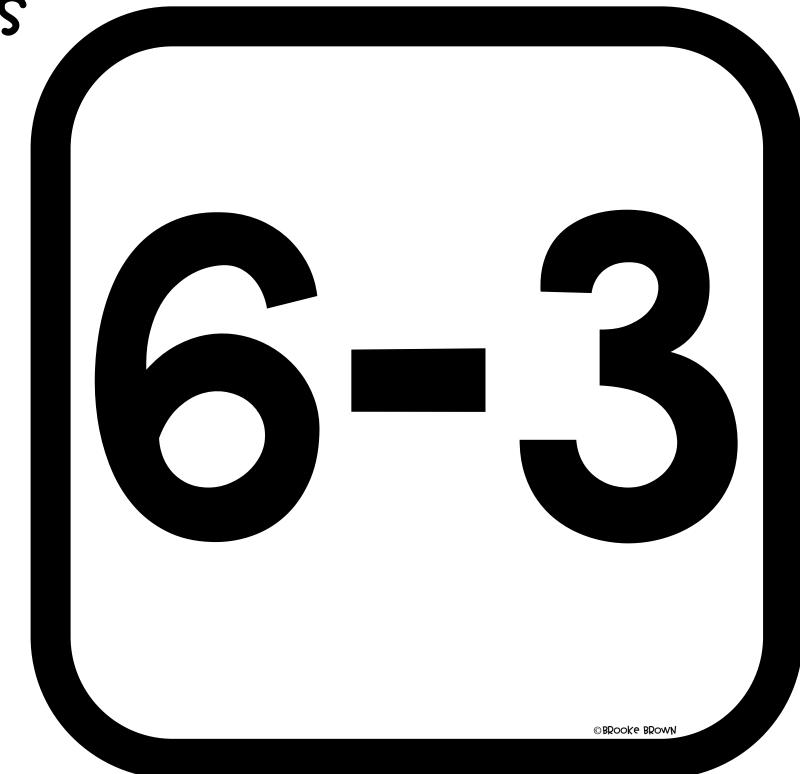
-2 facts



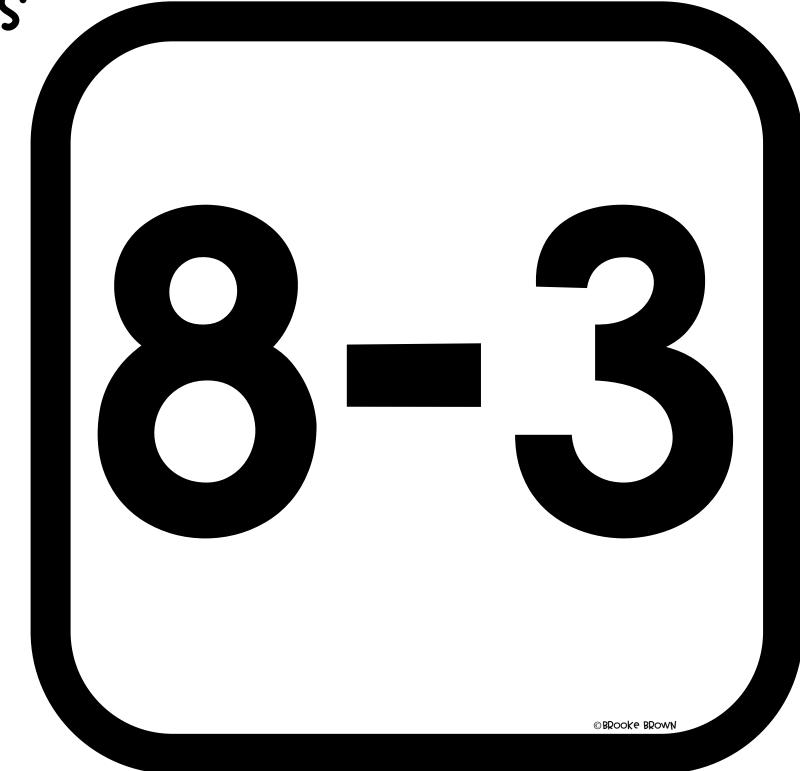




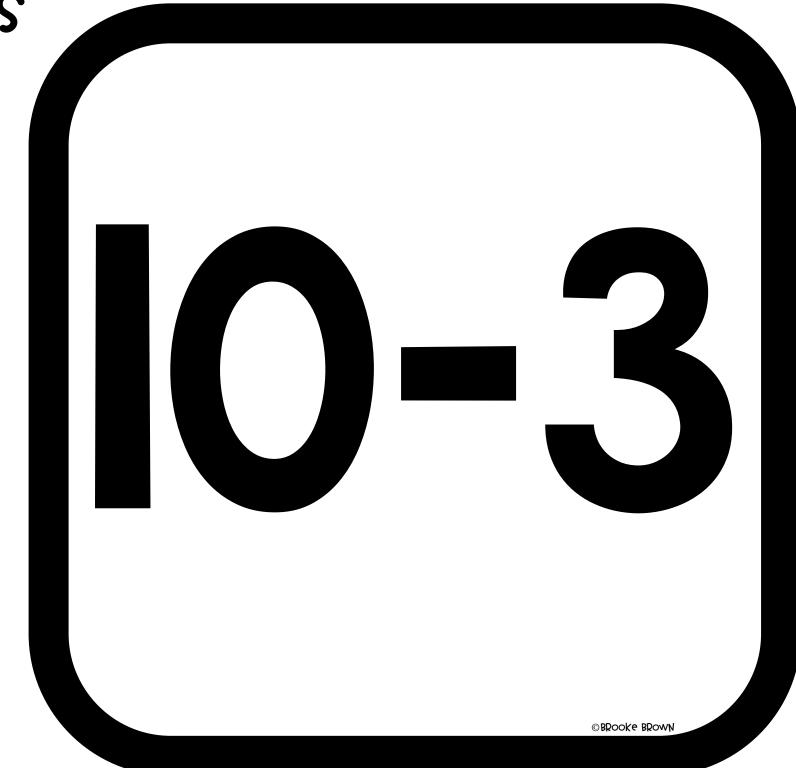




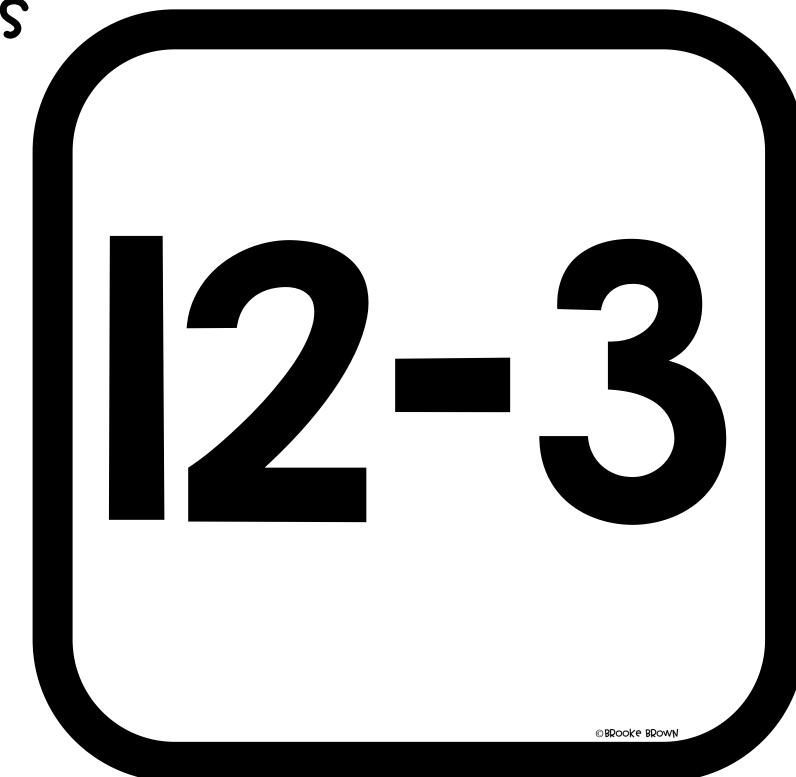


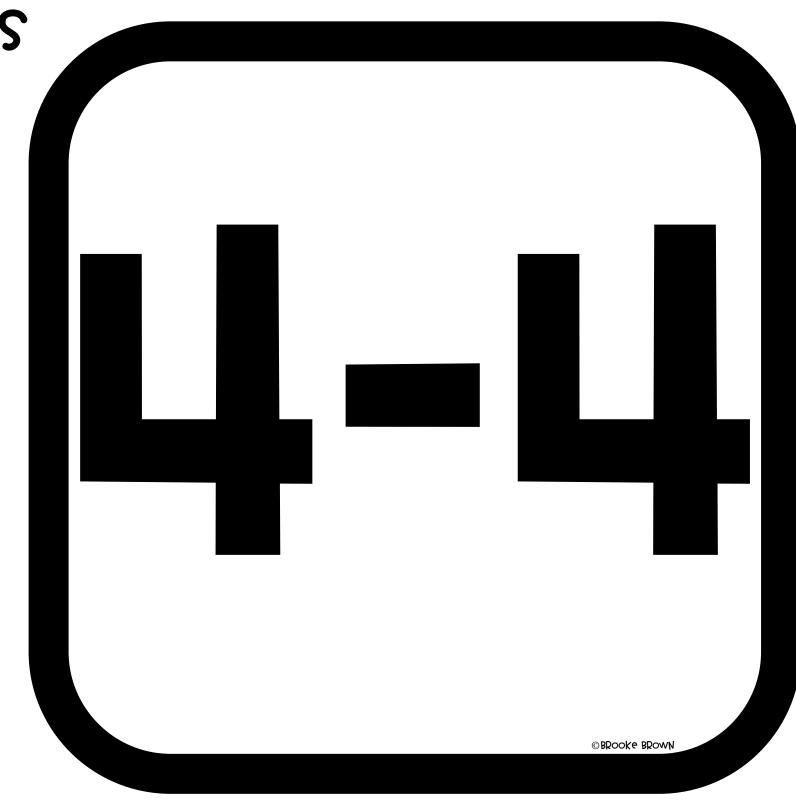




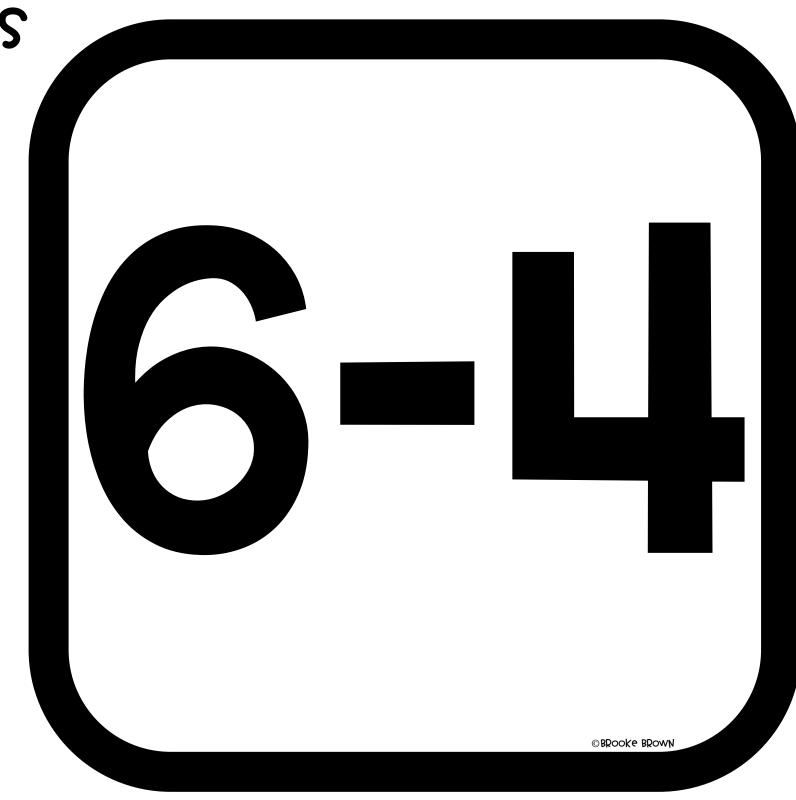


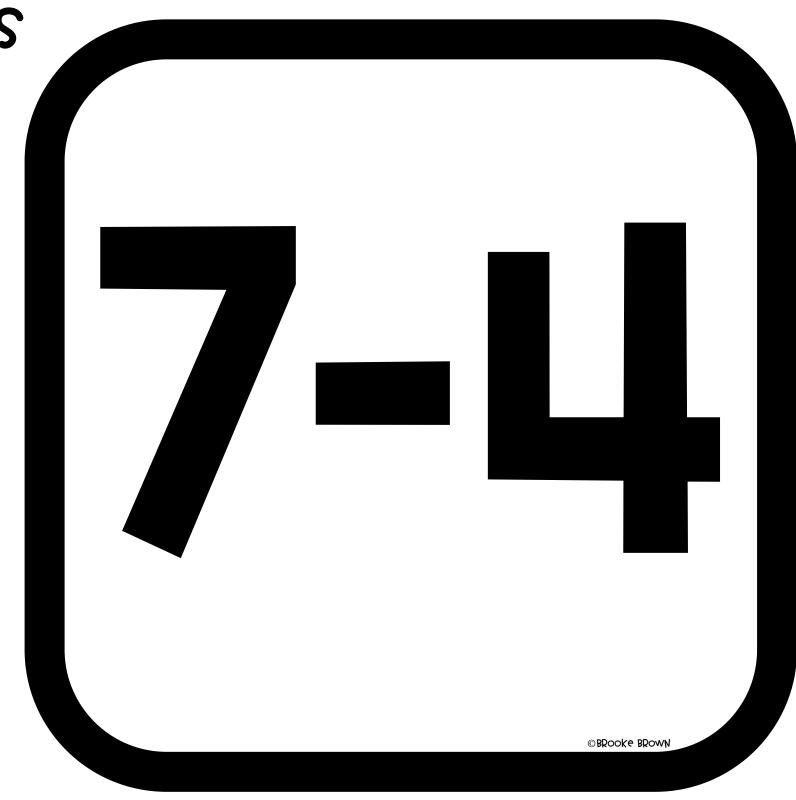


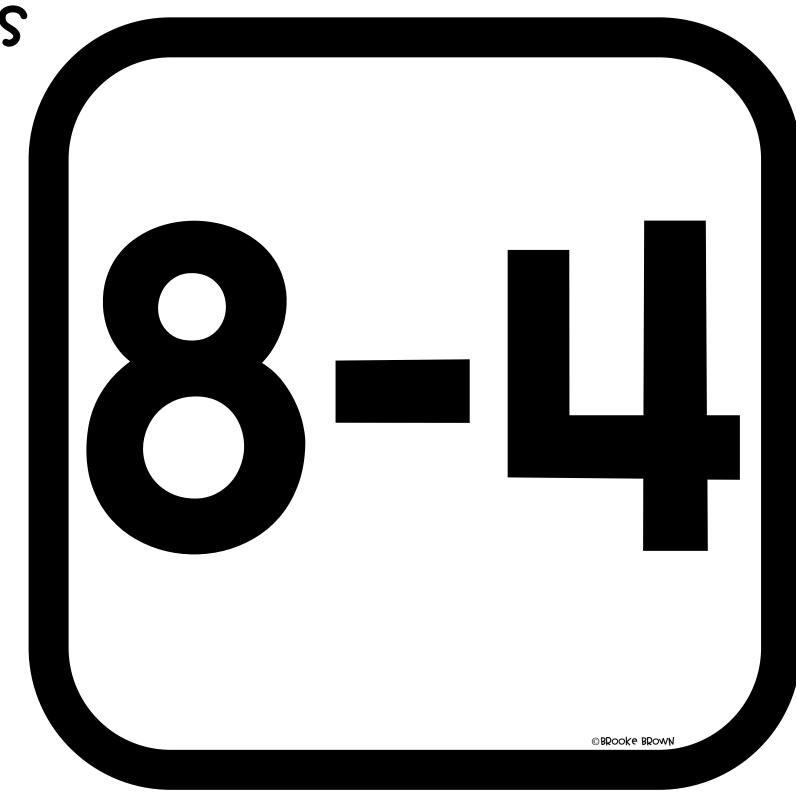


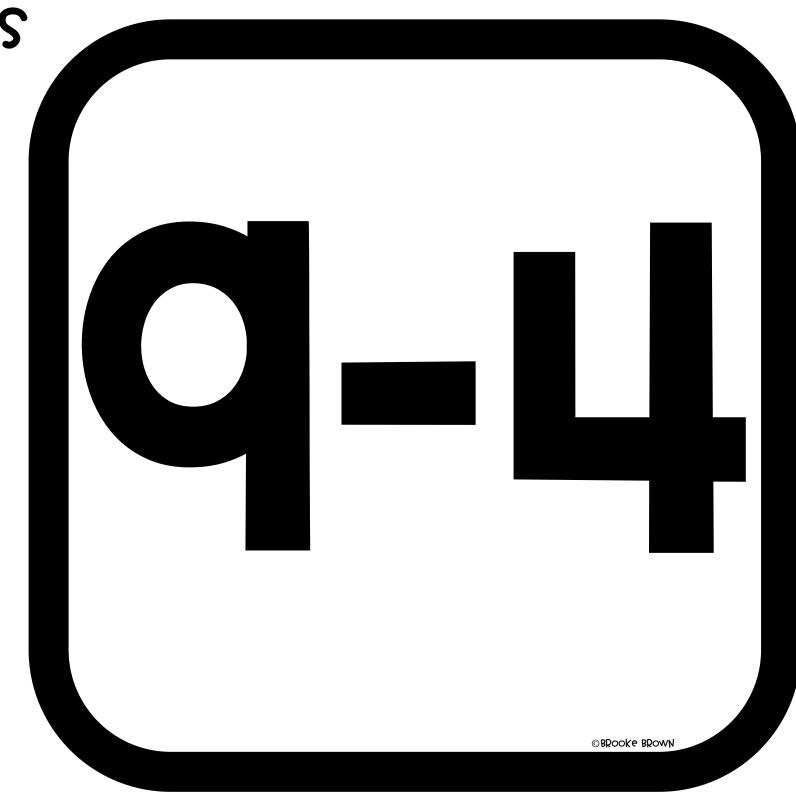




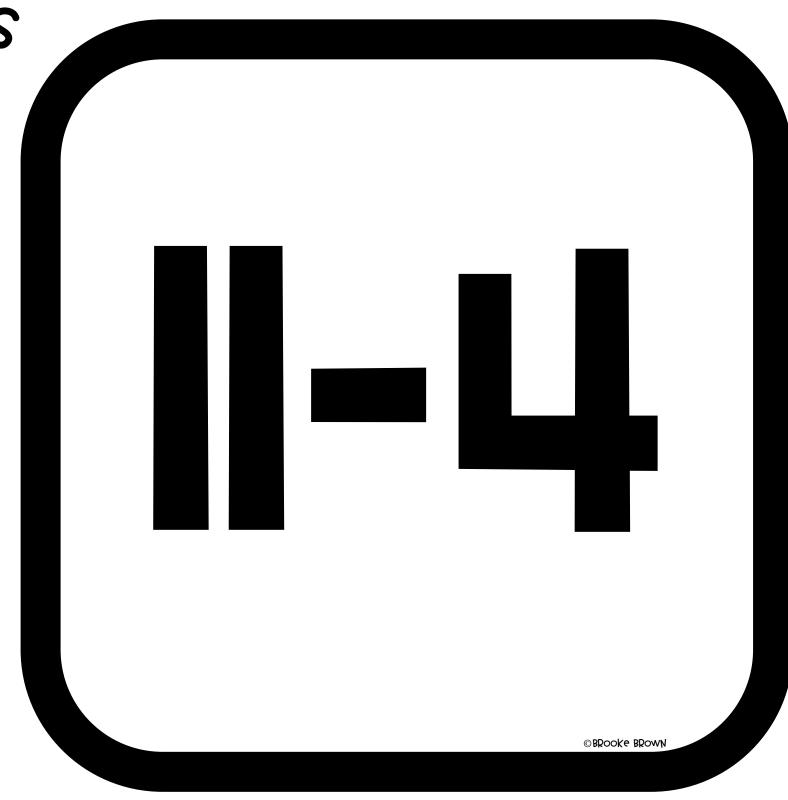














-5 facts ©BRooke BROWN





-5 facts ©BRooke BROWN

-5 facts ©BRooke BROWN







-e tacts ©BRooke BROWN

-e tacts



-e tacts ©BRooke BROWN

©BRooke BROWN

-e tacts

©BRooke BROWN

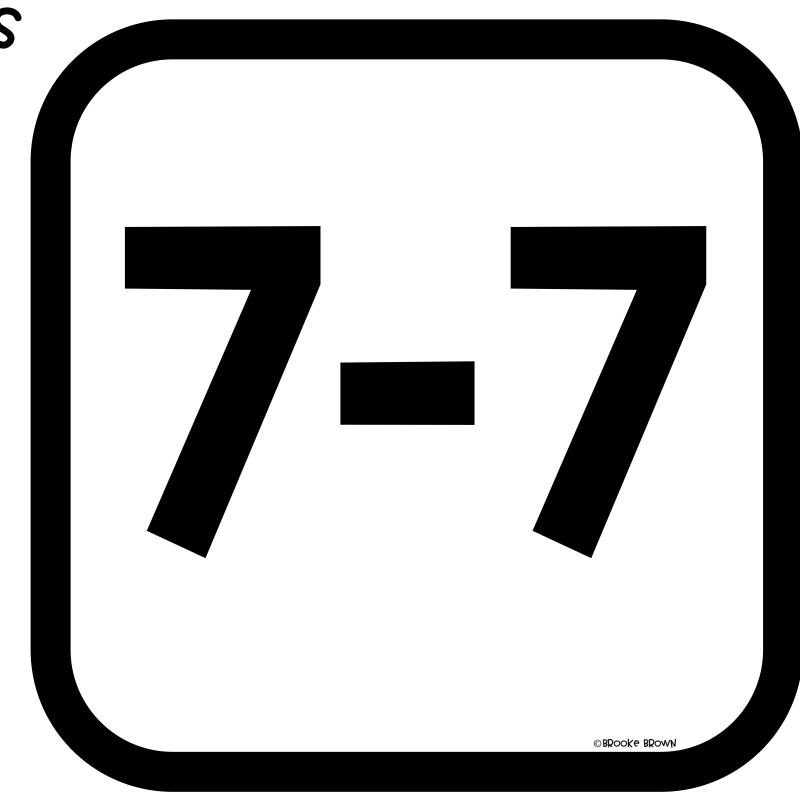
-e tacts

-e tacts ©BRooke BROWN

-e tacts



-7 facts



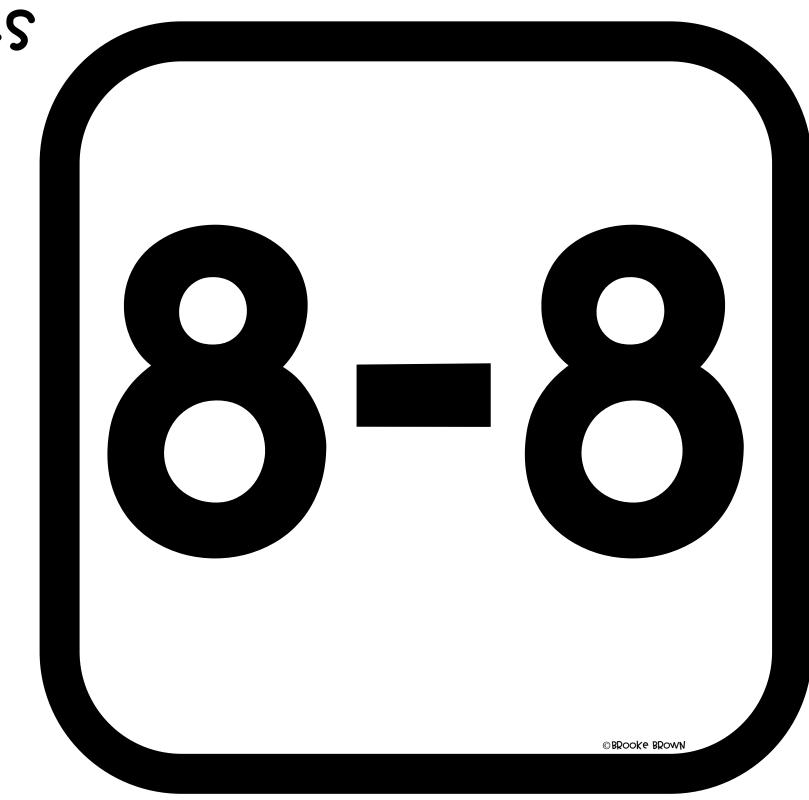


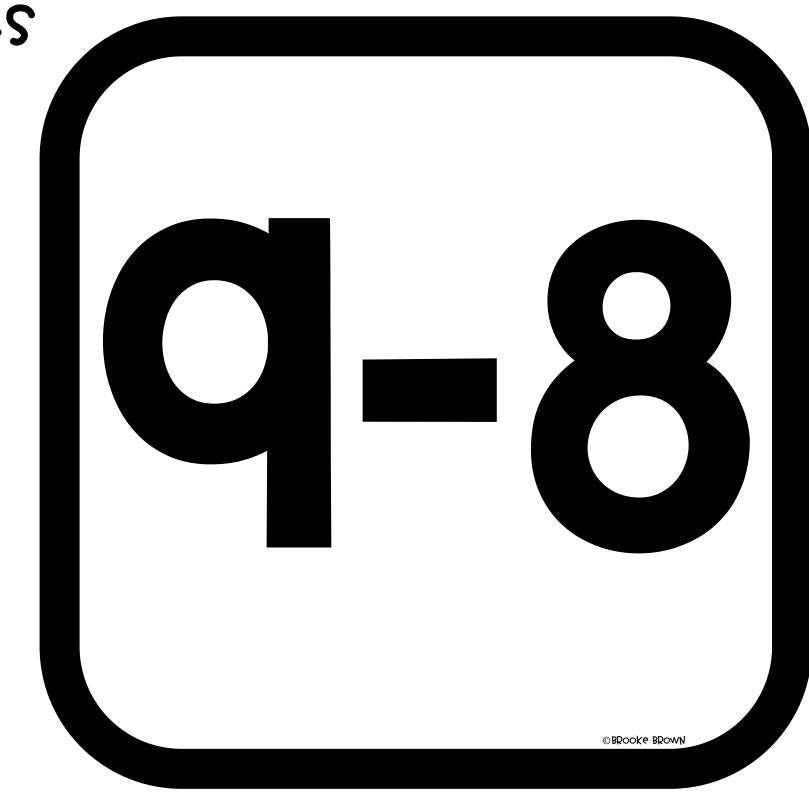


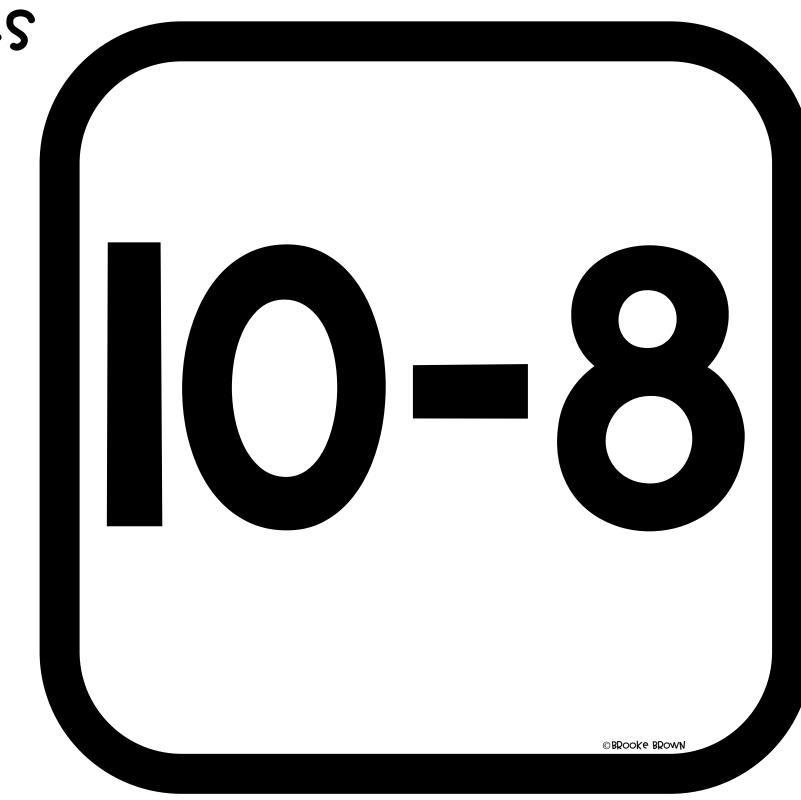


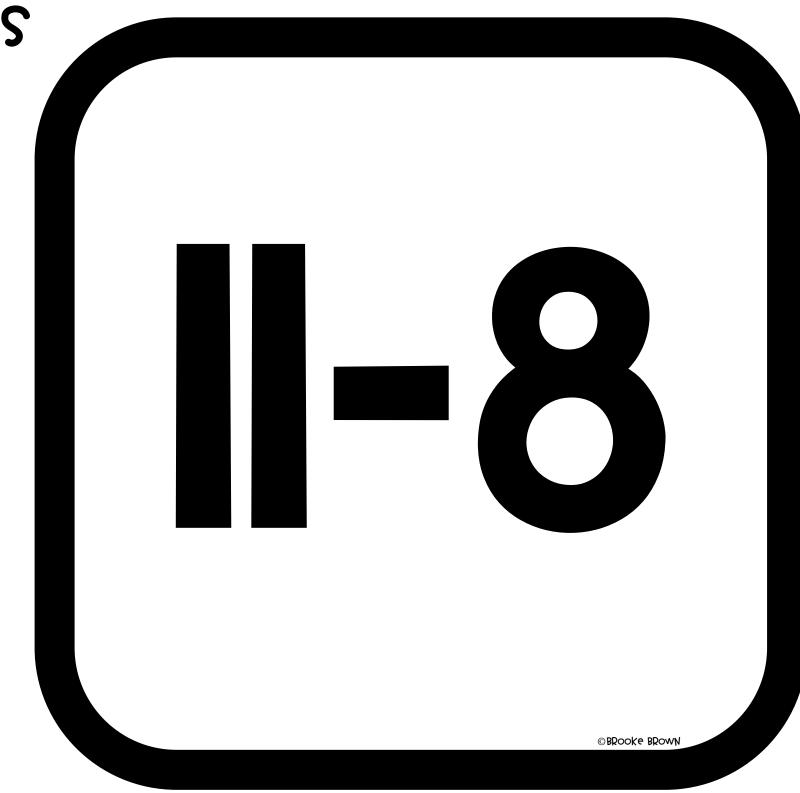






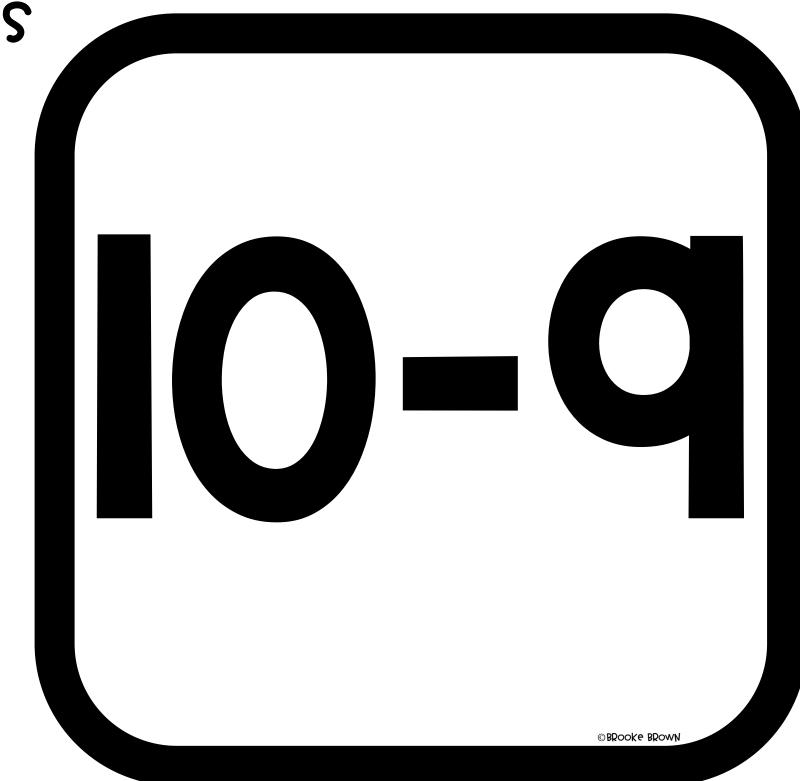


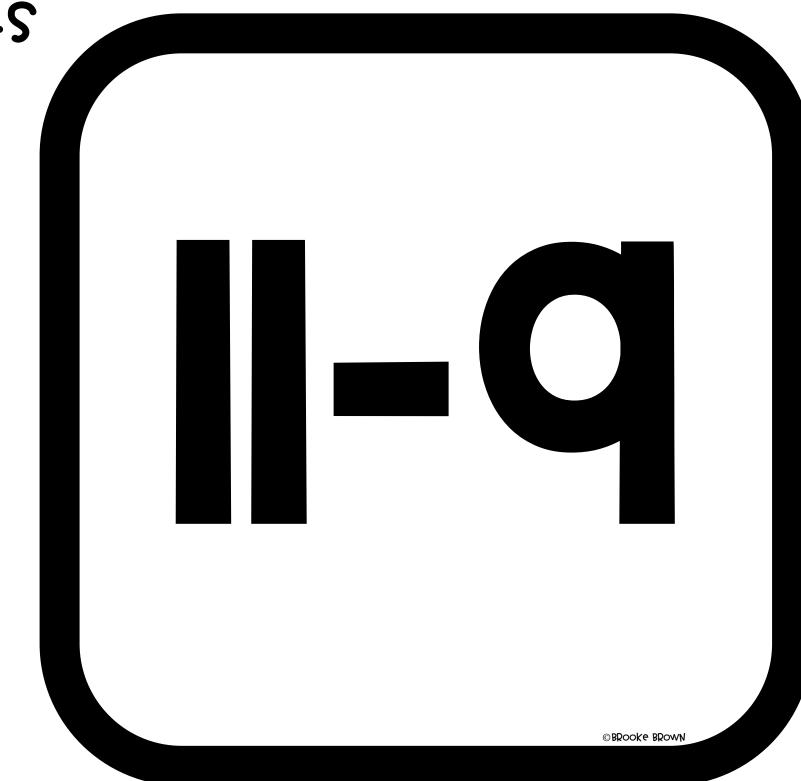




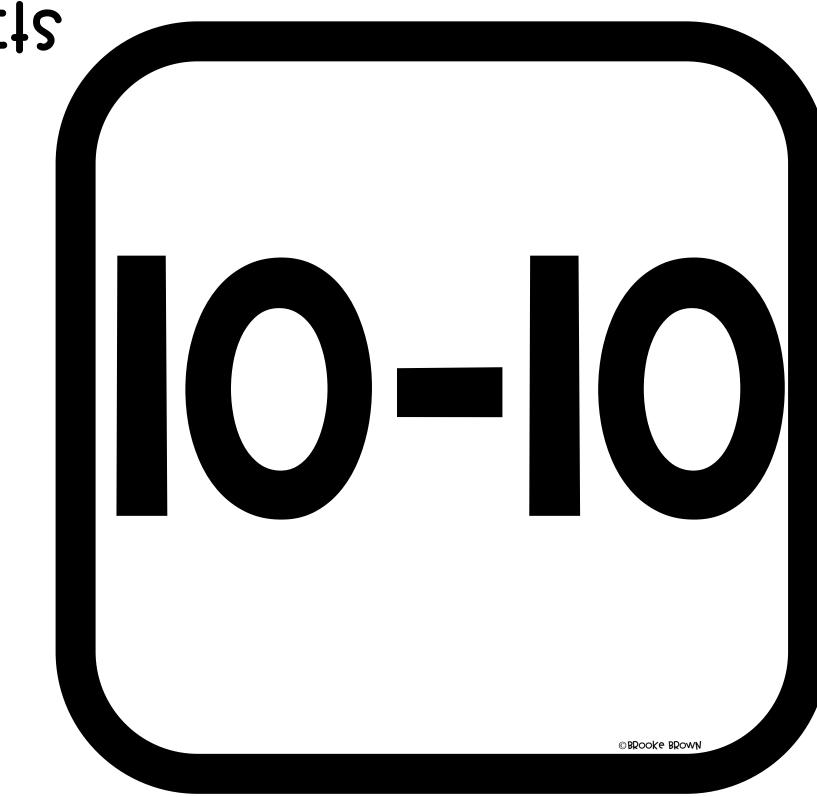




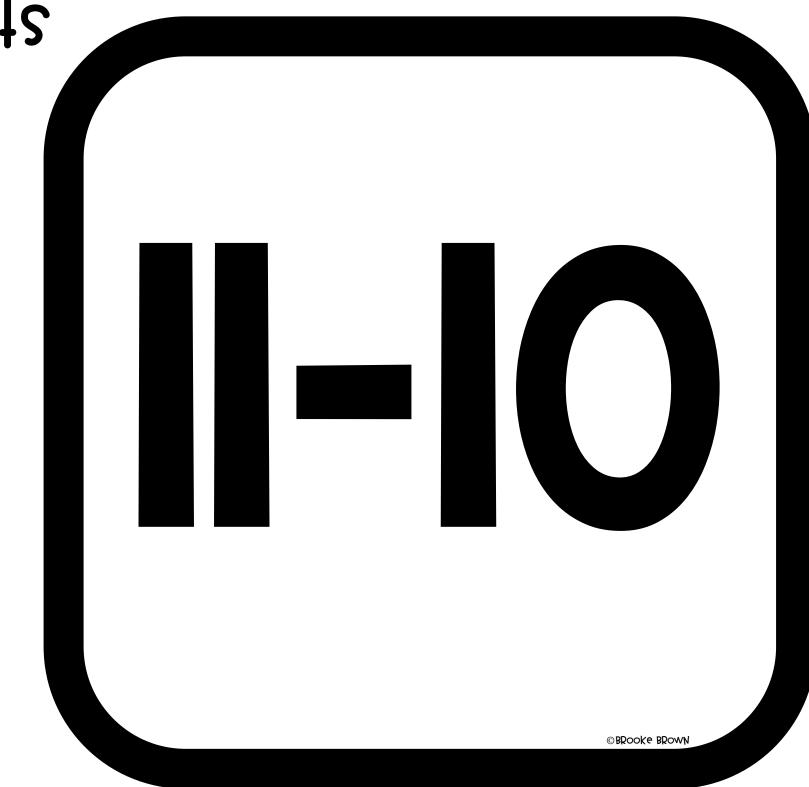






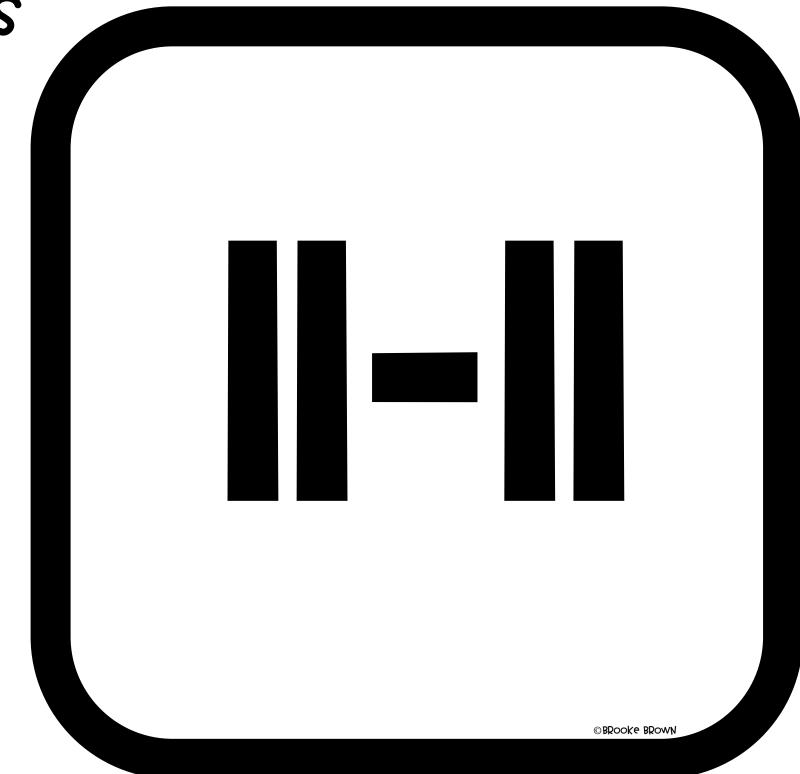


-10 tacts



-10 tacts

-10 tacts © BRooke BROWN

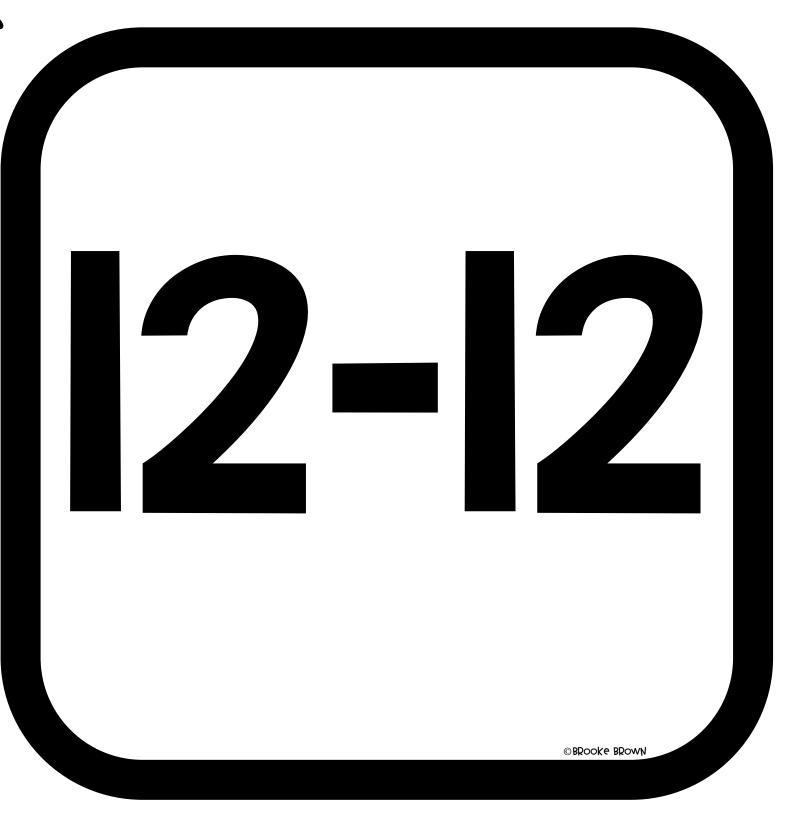


-II tacts

-11 tacts



-12 facts

















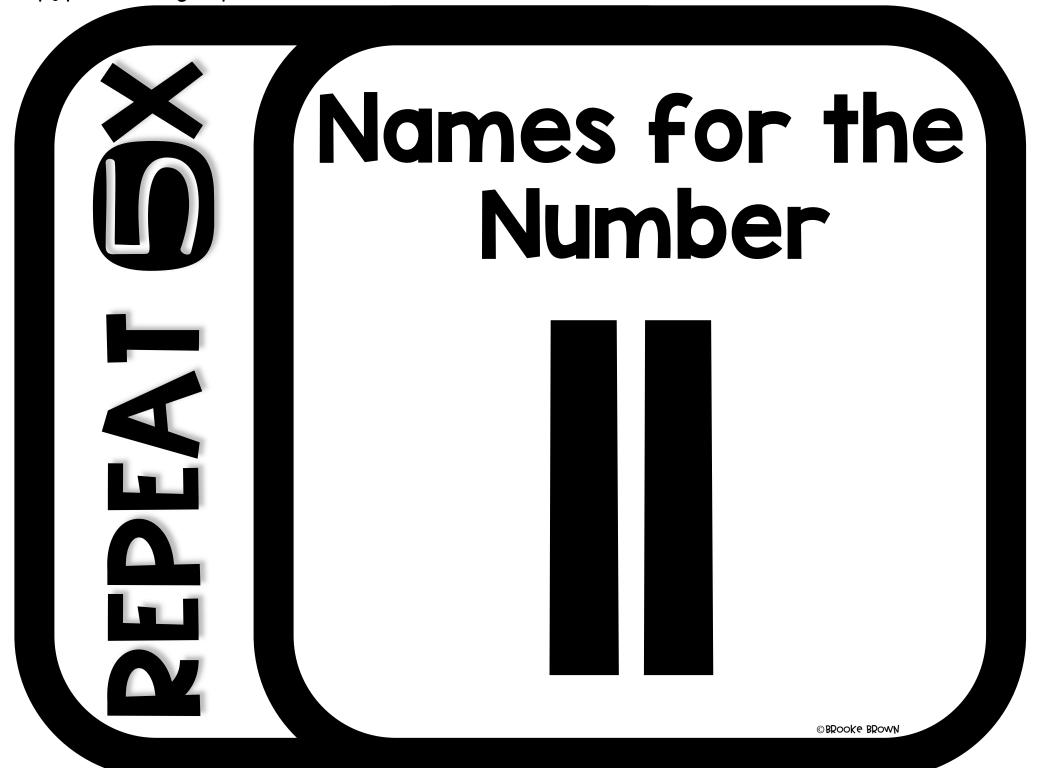


Names for the Number

© BRooke BROWN







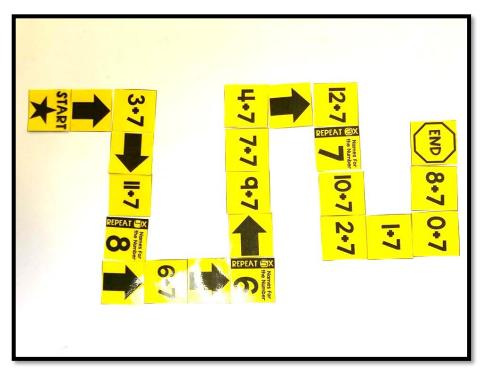


CODING BOARD GAME

For a different unplugged coding option, smaller board game style pieces and playing pieces are included on the following pages for students to play with partners on a tabletop or floor area. One page/set of basic facts can be copied for each pair of students to cut apart. To reuse game pieces and playing pieces, laminate for durability and store in plastic baggies. You may also want to copy each page/fact set on a different colored paper to make them easier to tell apart.

To play the game, both students need one robot playing piece on page 286. One student builds a sequence of code on a tabletop or floor space. The other student then navigates the code using his or her robot to answer basic facts and write names for numbers. The other student uses answer keys to check responses. Students then switch places while the other student navigates the code. The game can be repeated as many times as time allows or with another set of basic facts.

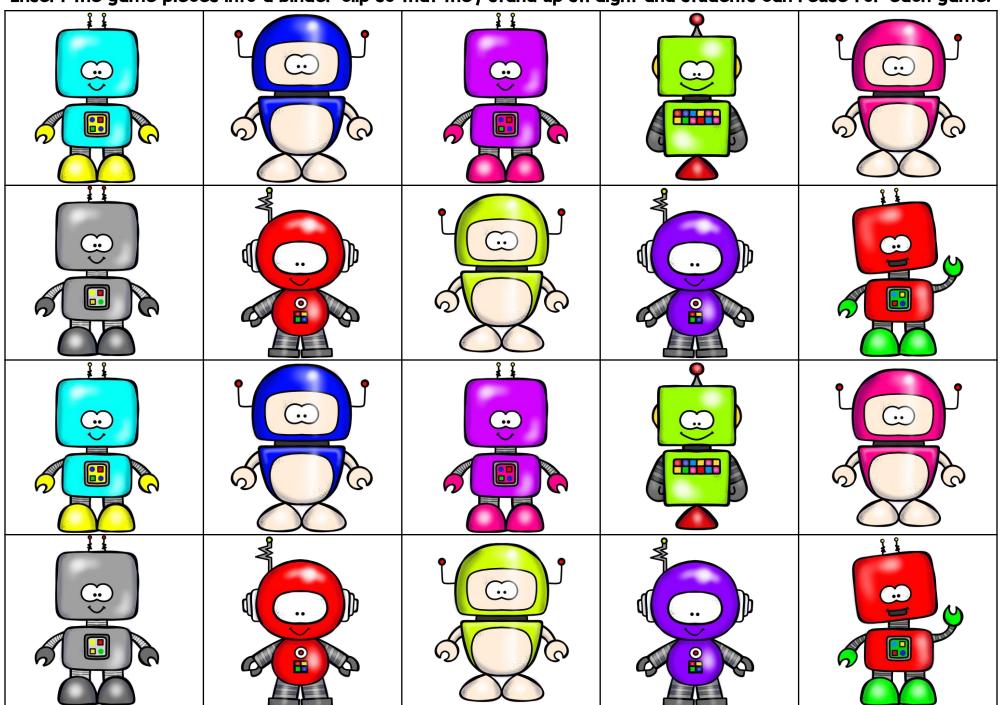




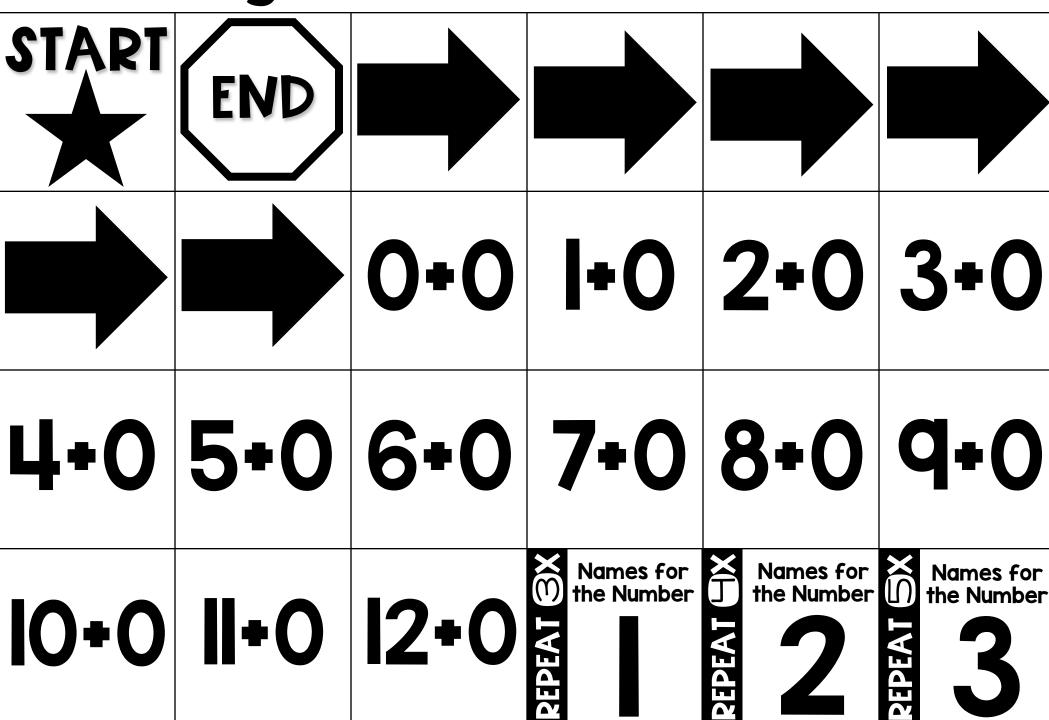
Coding Board Game Playing Pieces

Print and laminate one playing piece per student for the coding board game.

Insert the game pieces into a binder clip so that they stand up straight and students can reuse for each game.

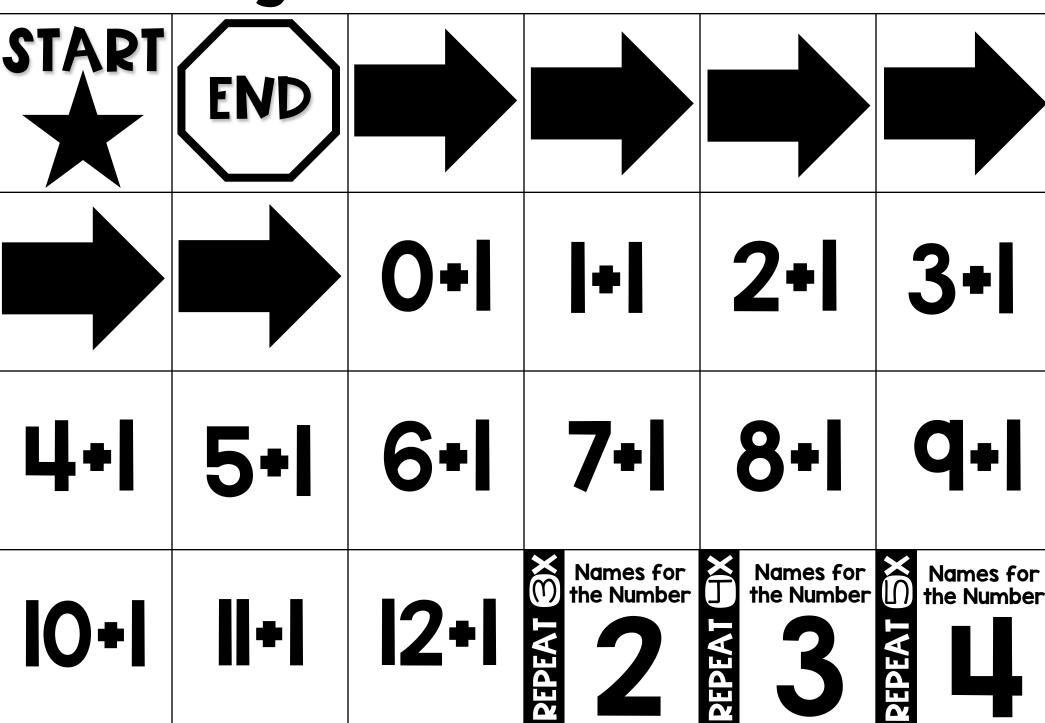


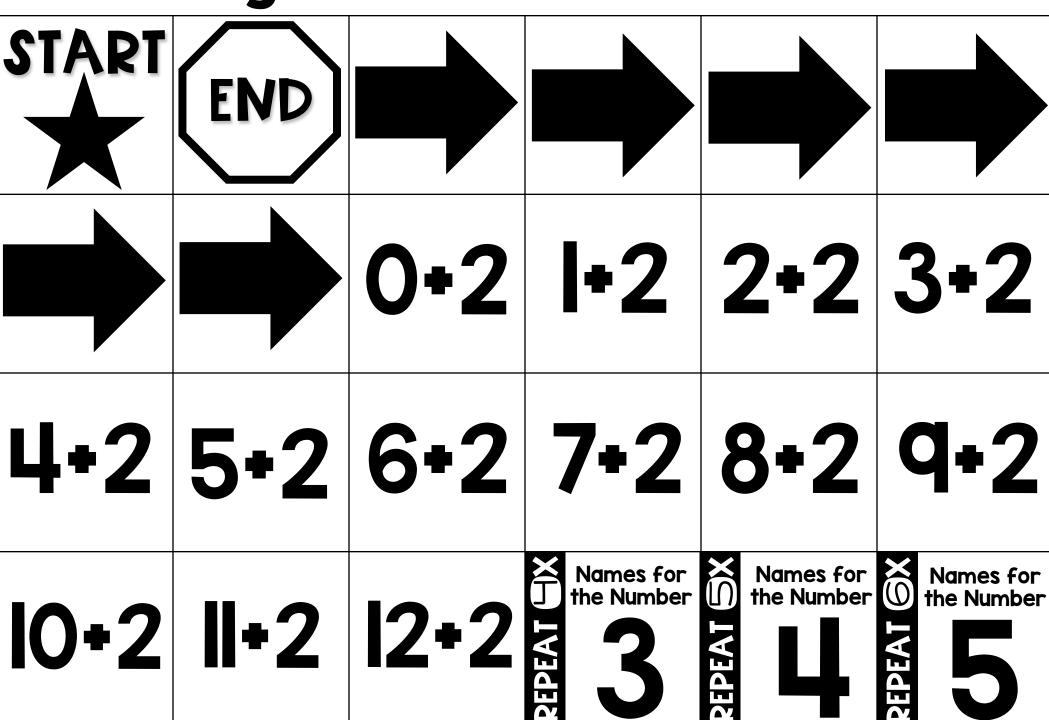
Coding Board Game Pieces: +0

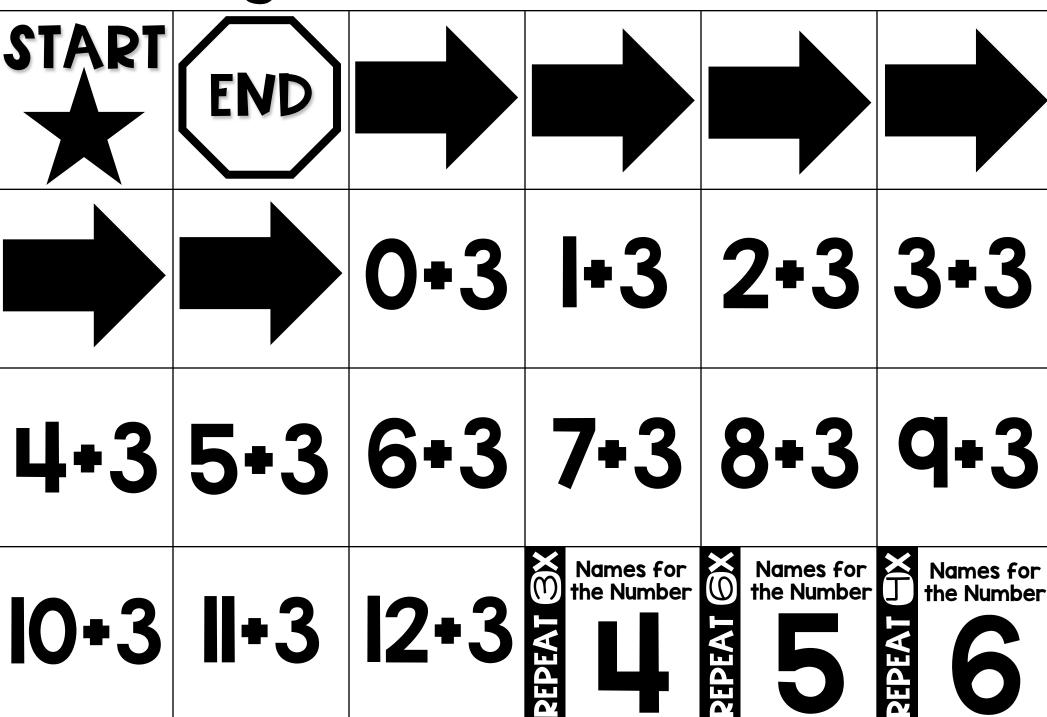


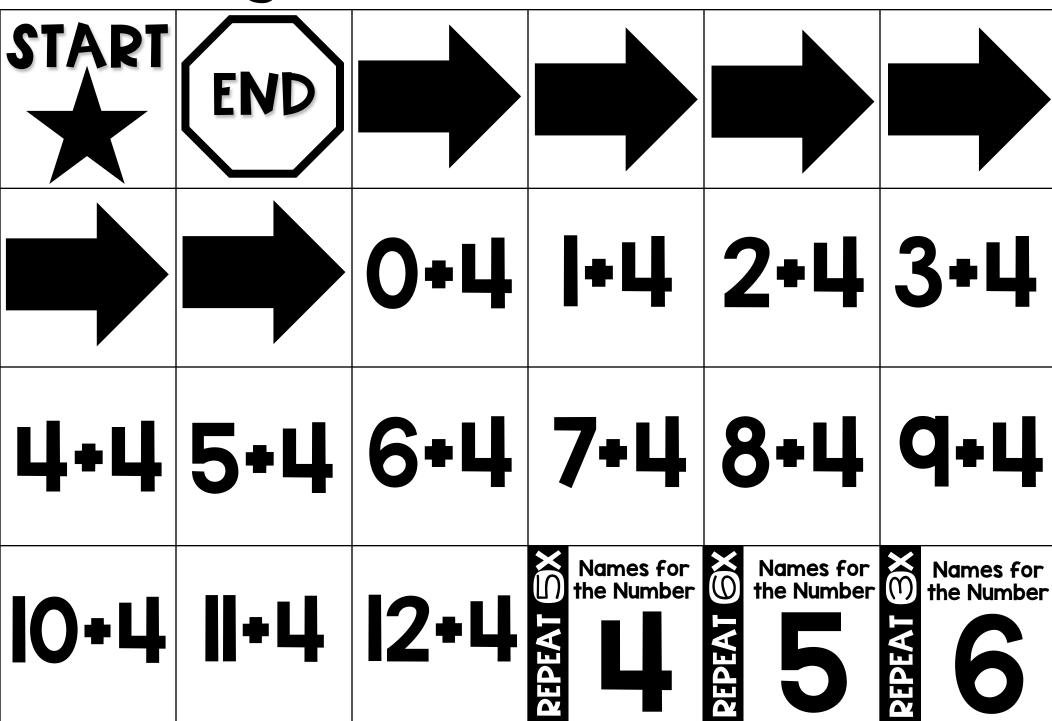
BROOKE BROWN

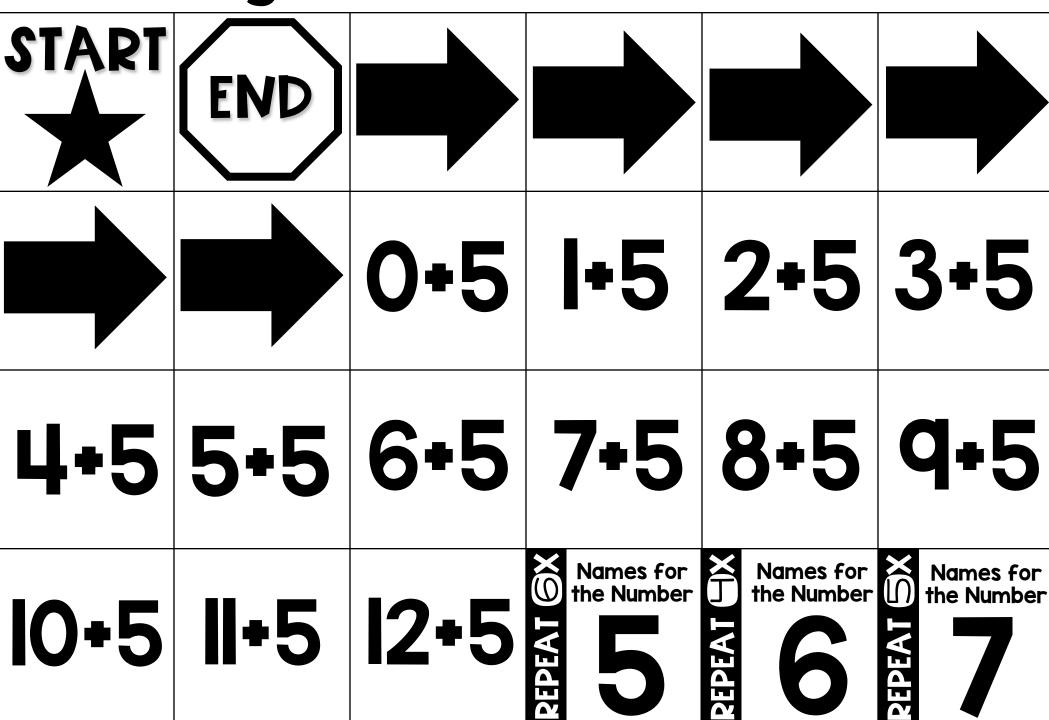
Coding Board Game Pieces: -I

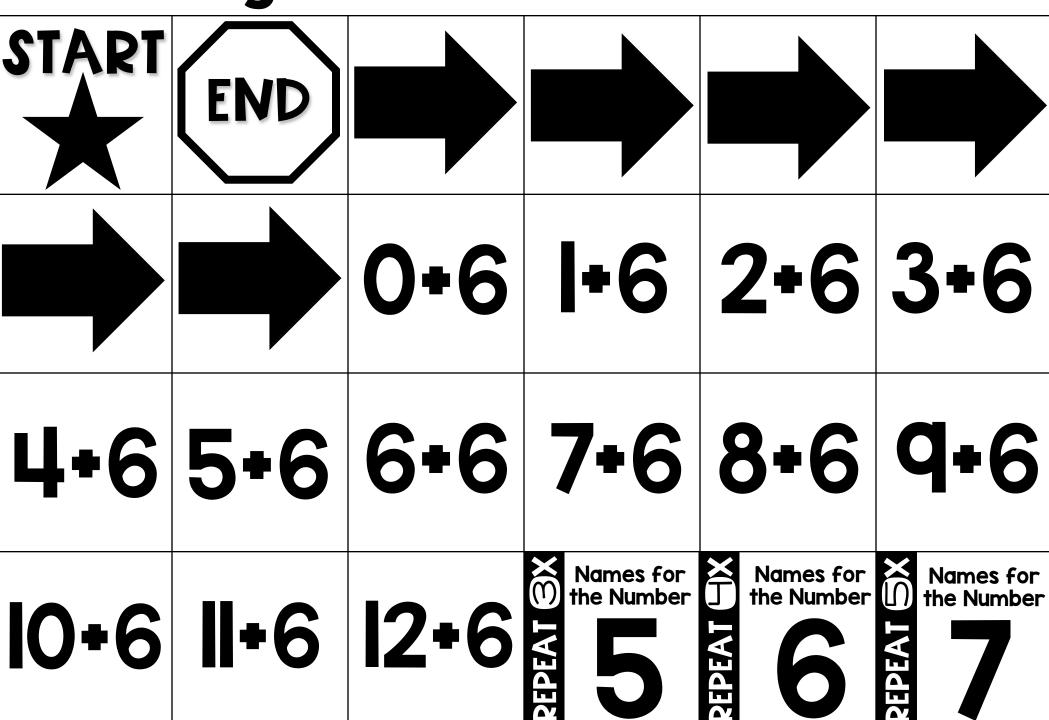


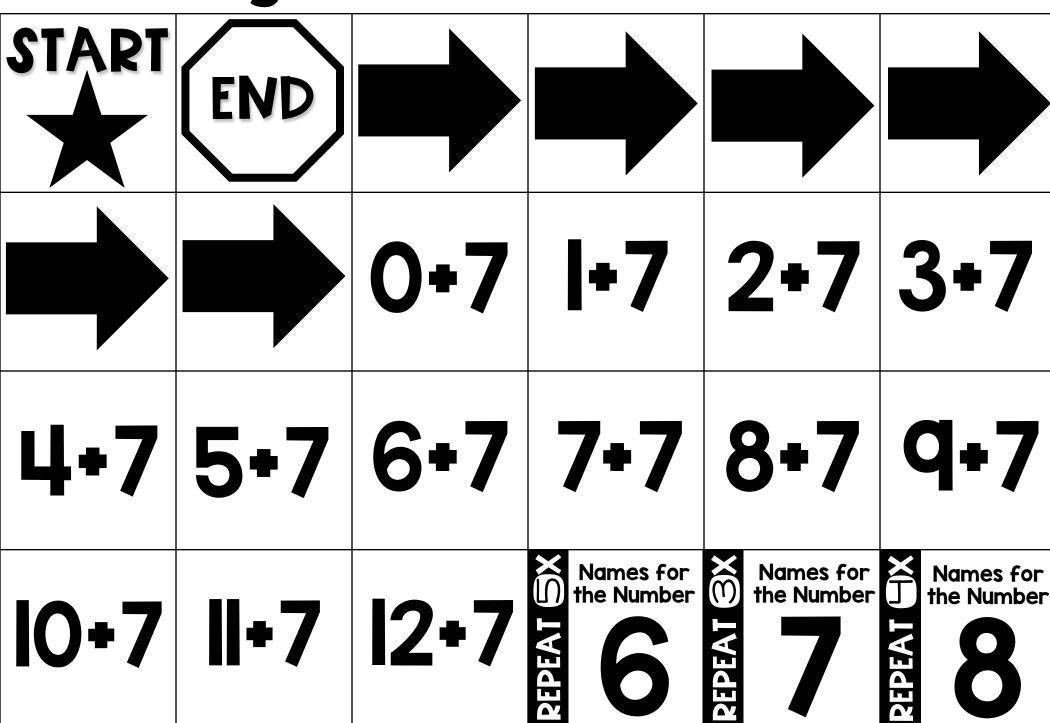




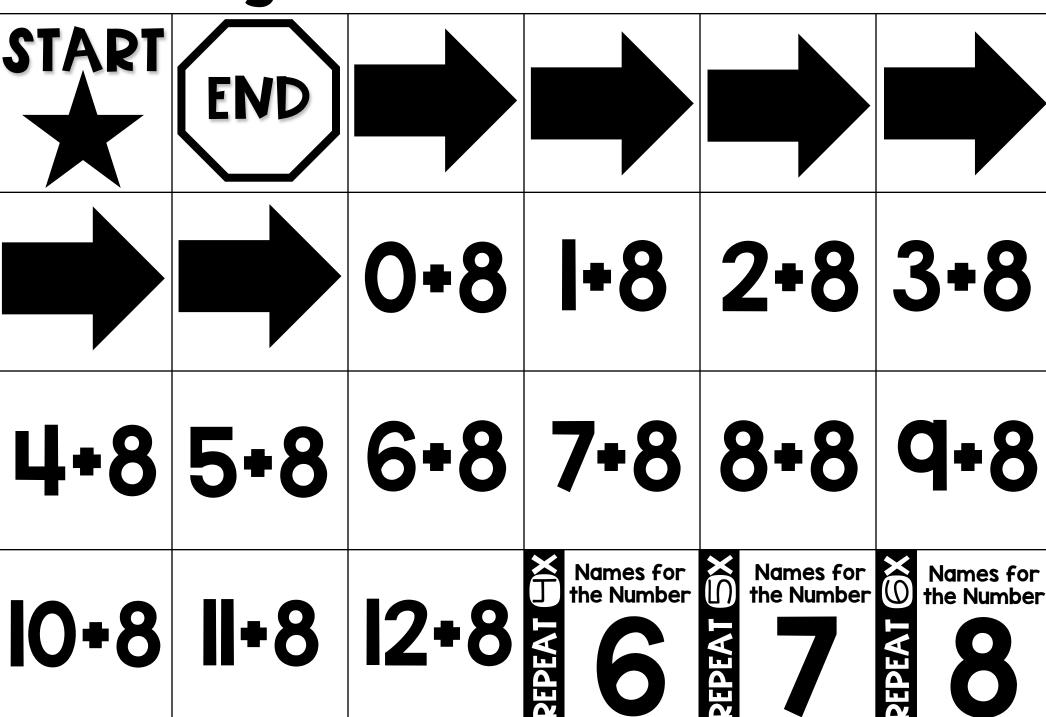


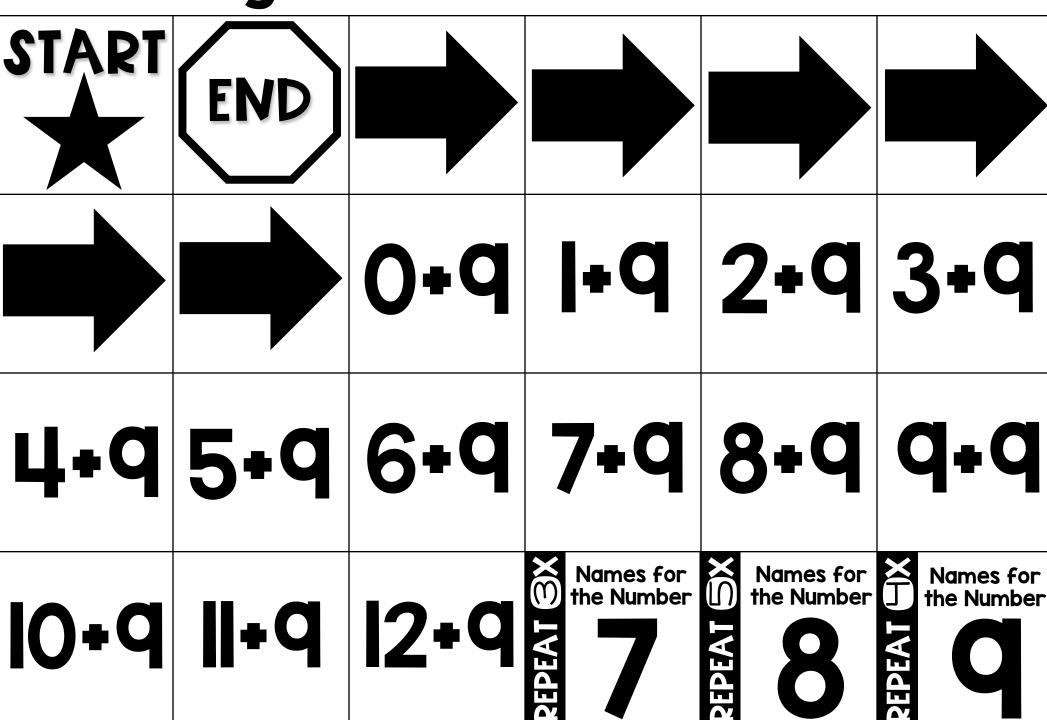


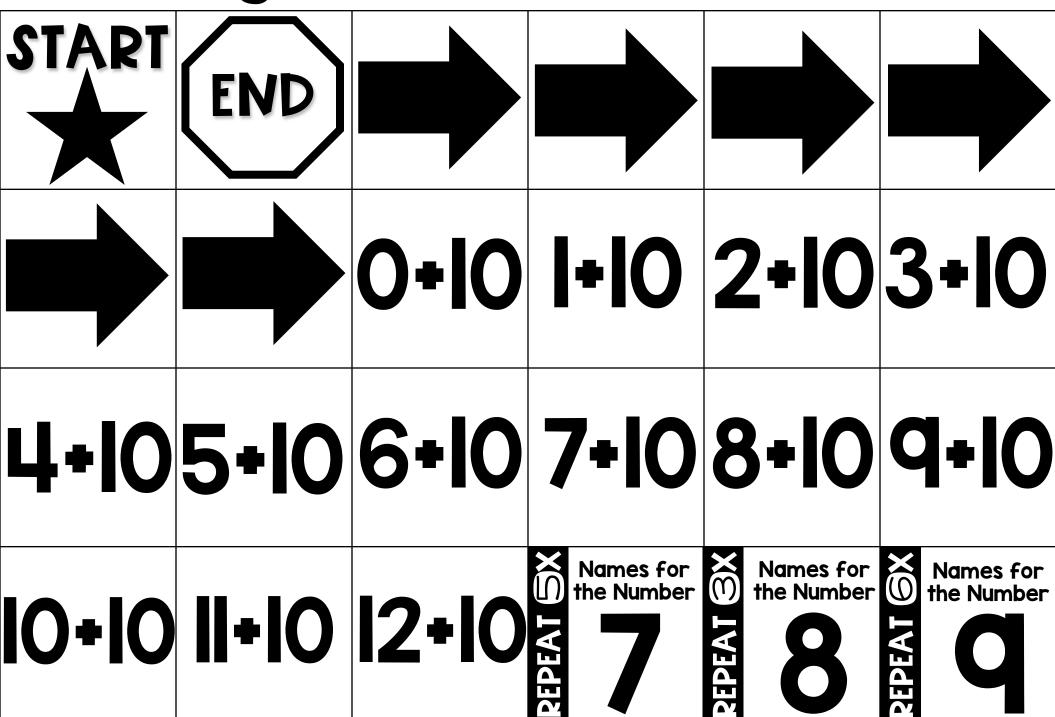


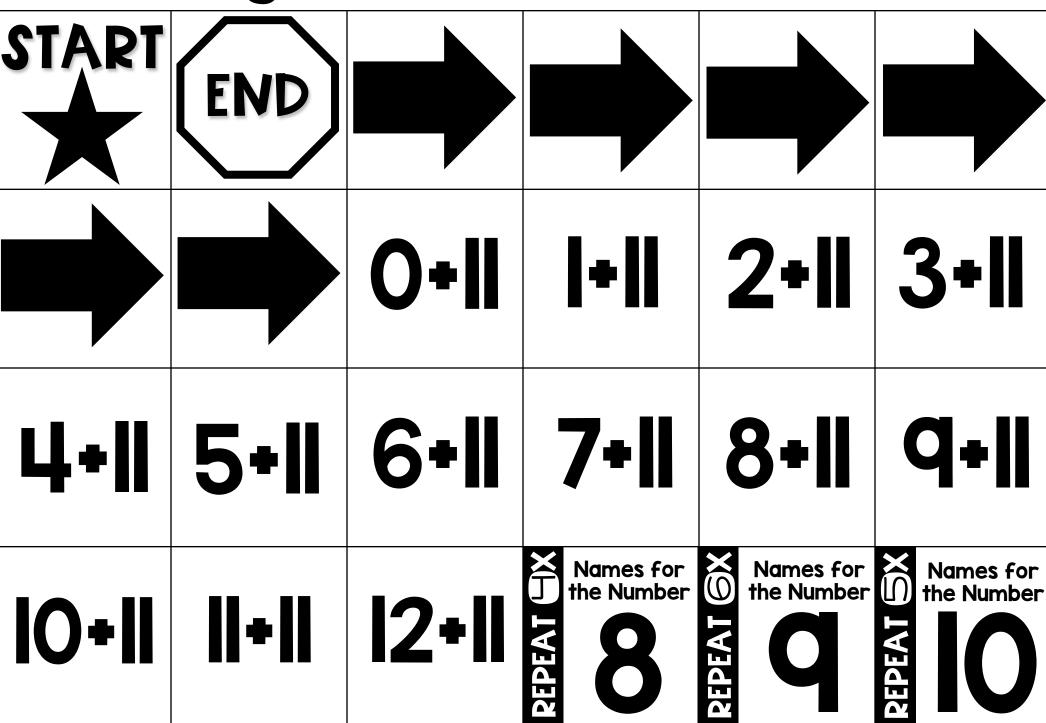


BRooke Brown

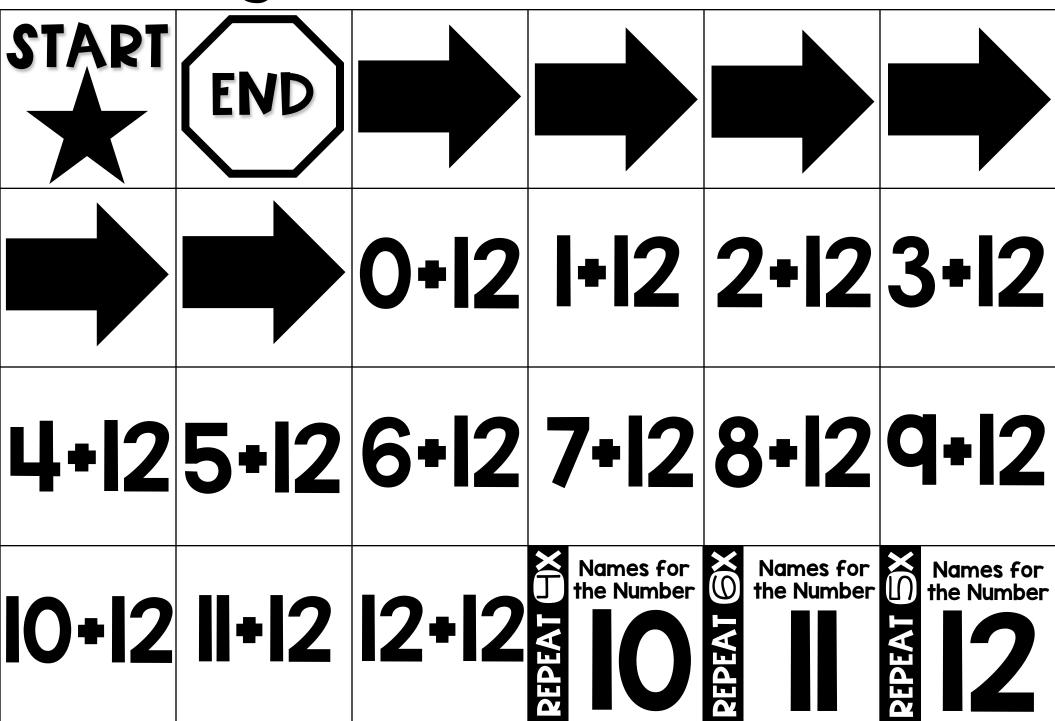




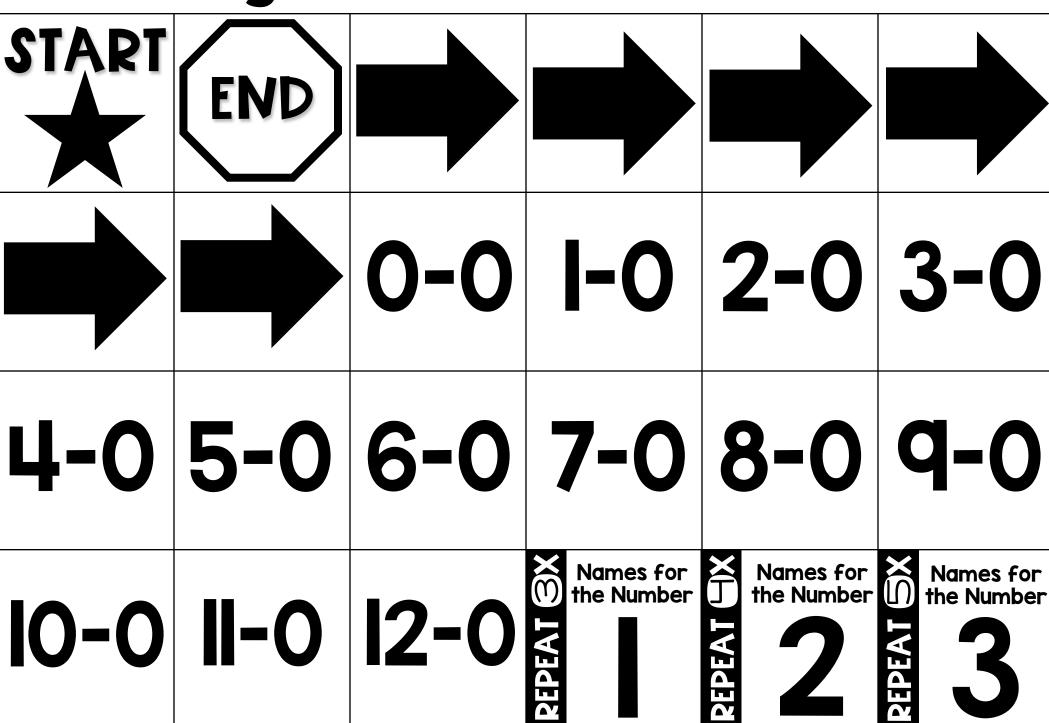


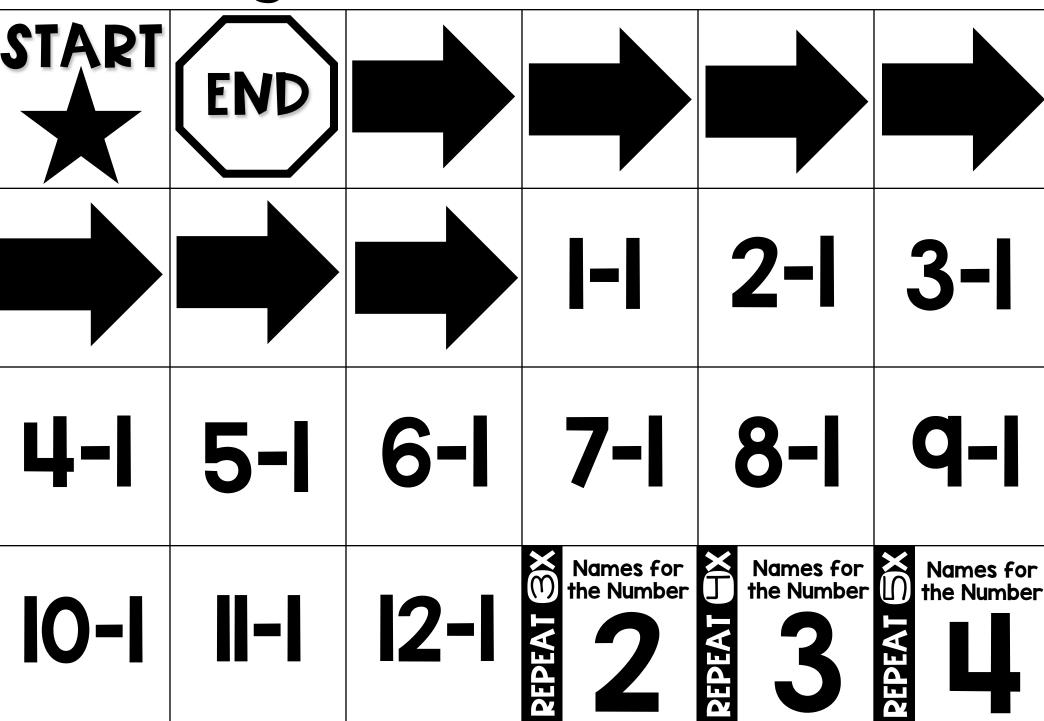


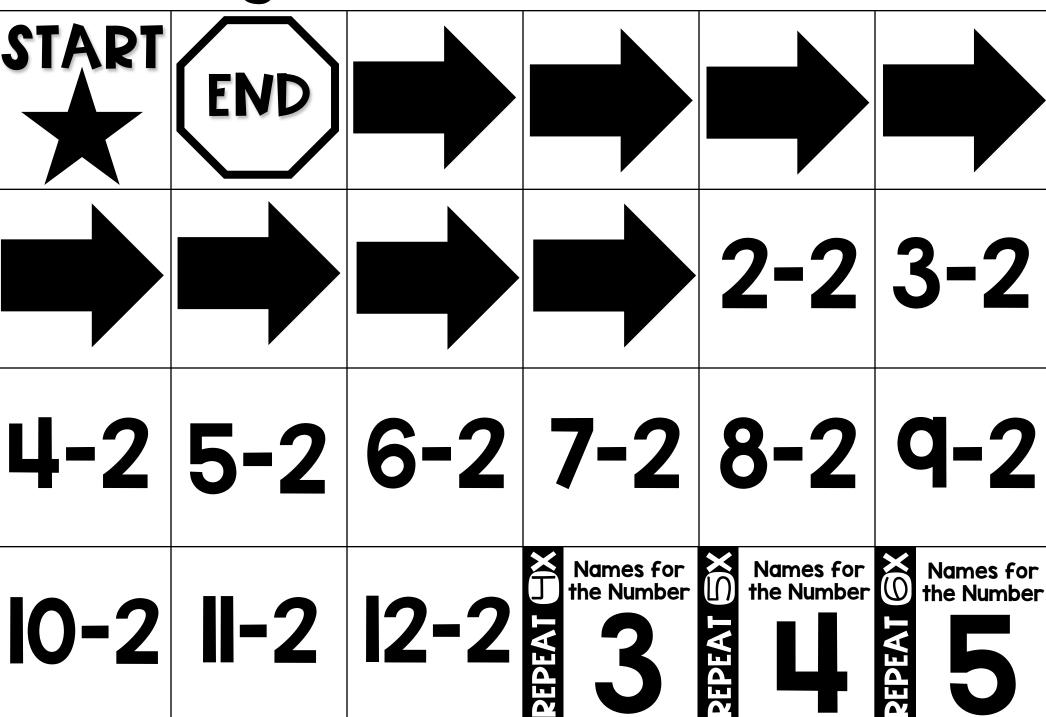
©BRooke BROWN

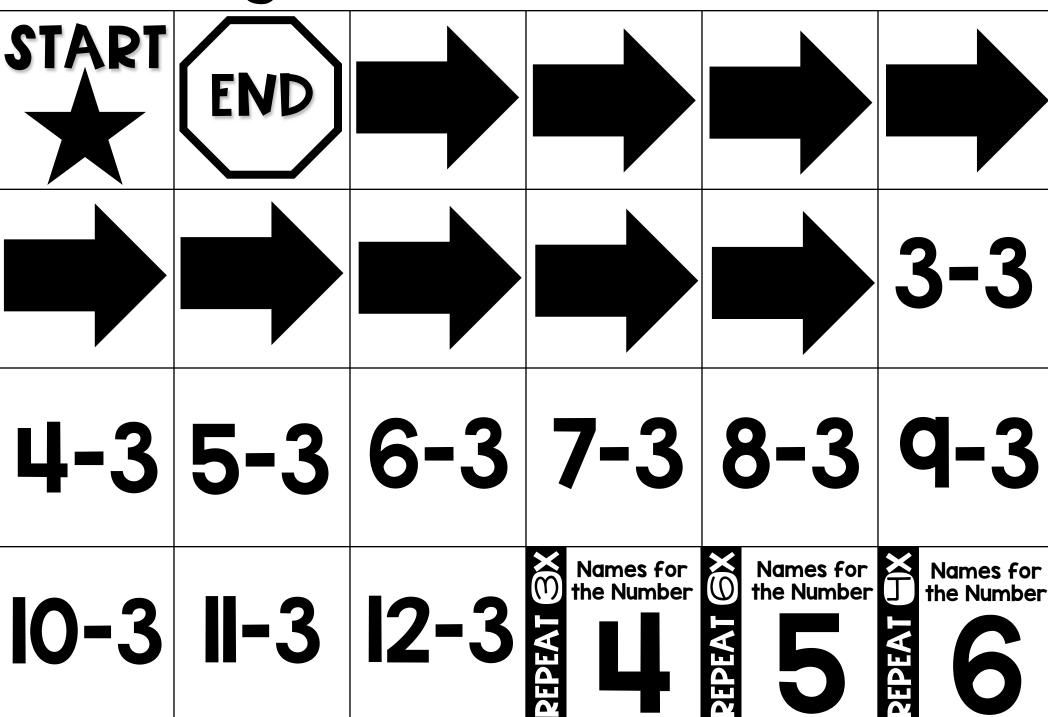


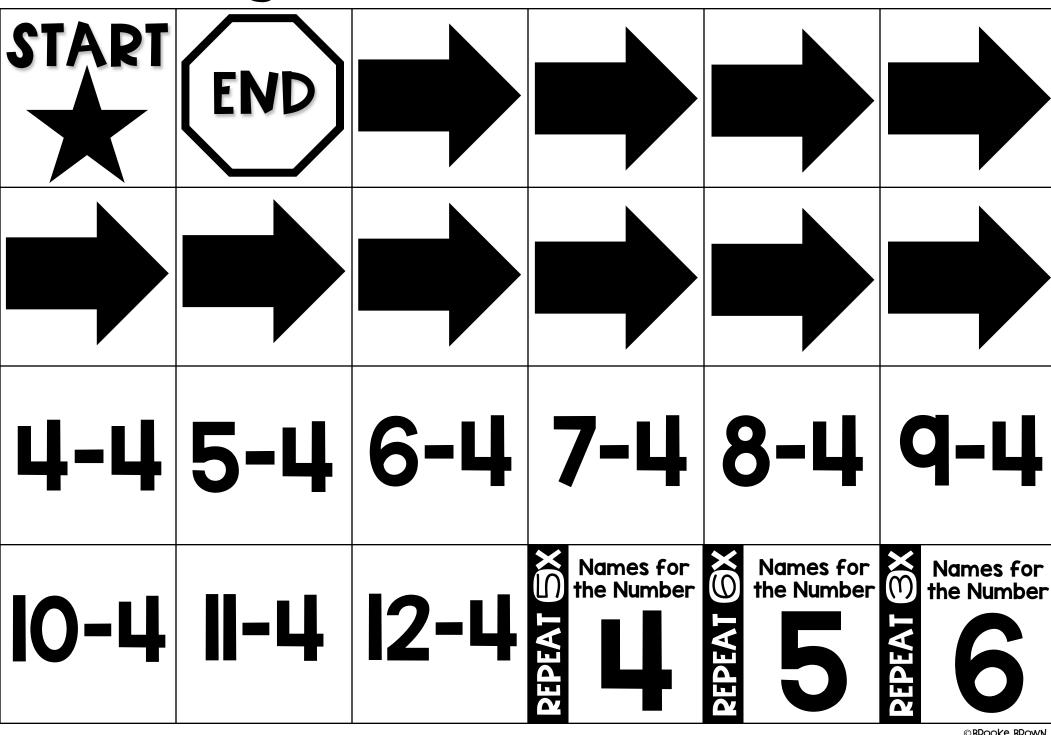
BRooke BROWN

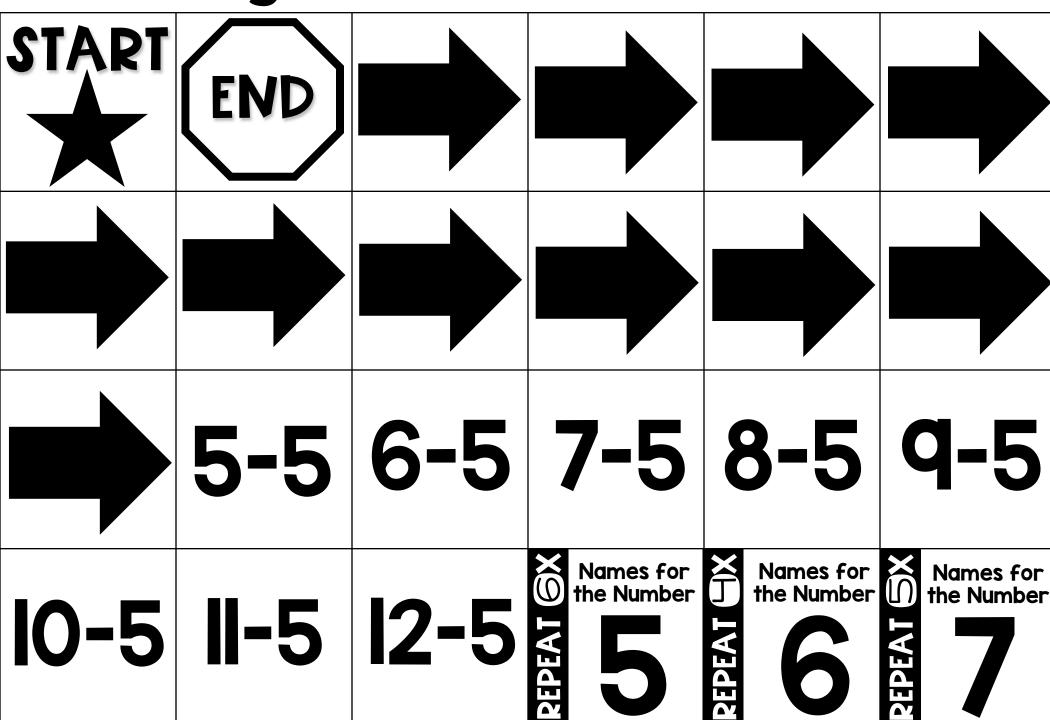




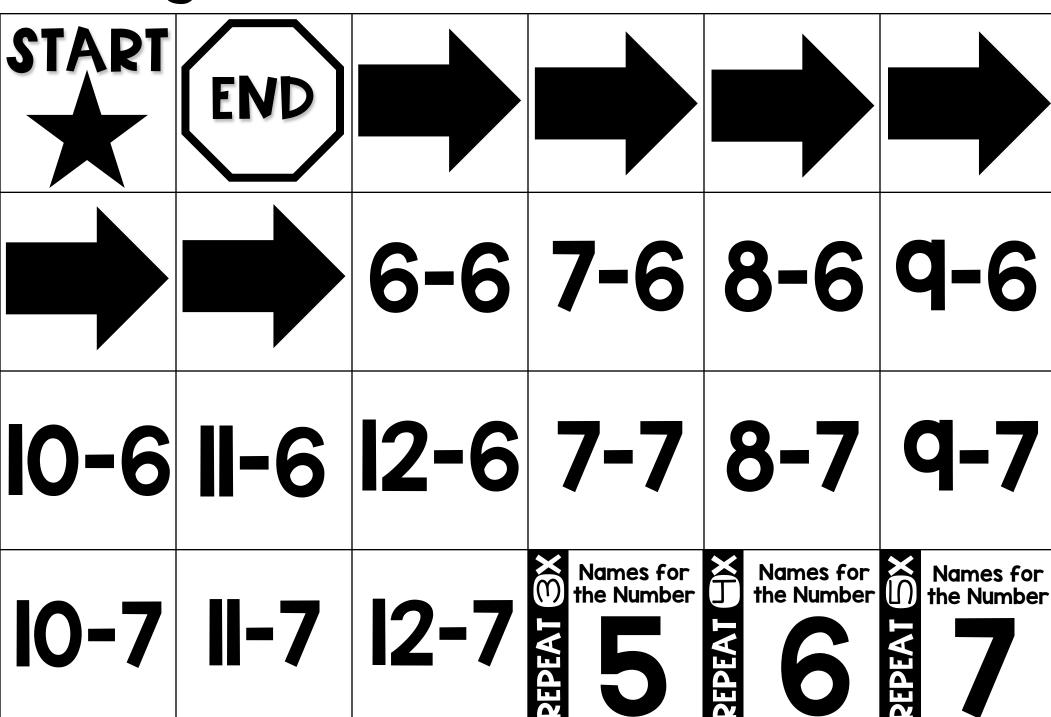




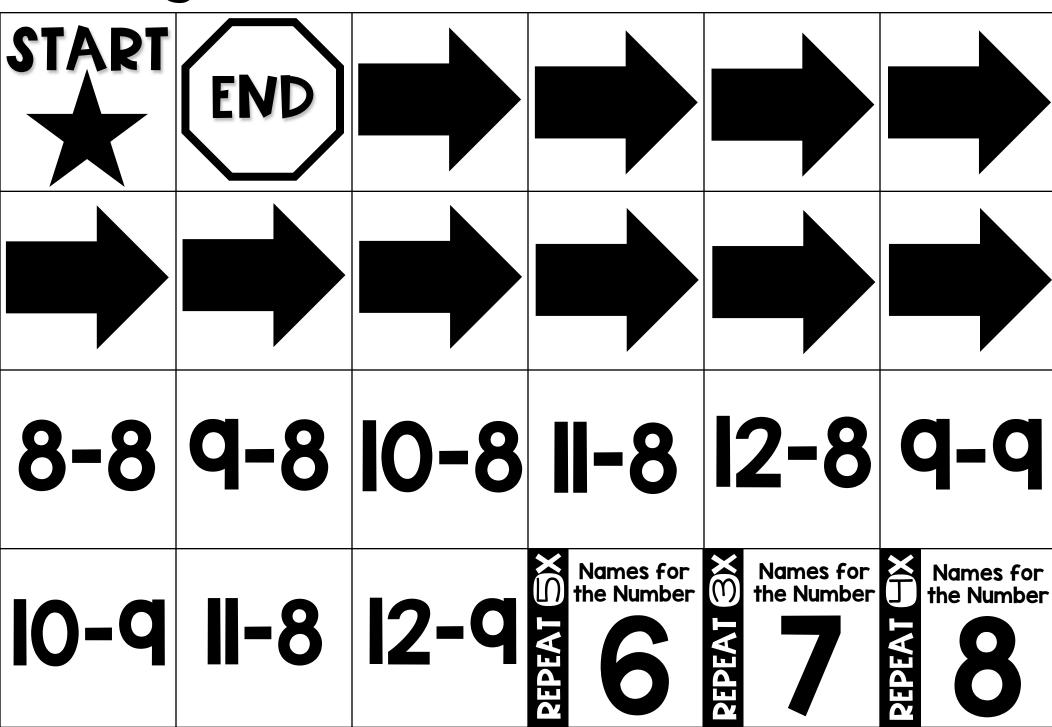




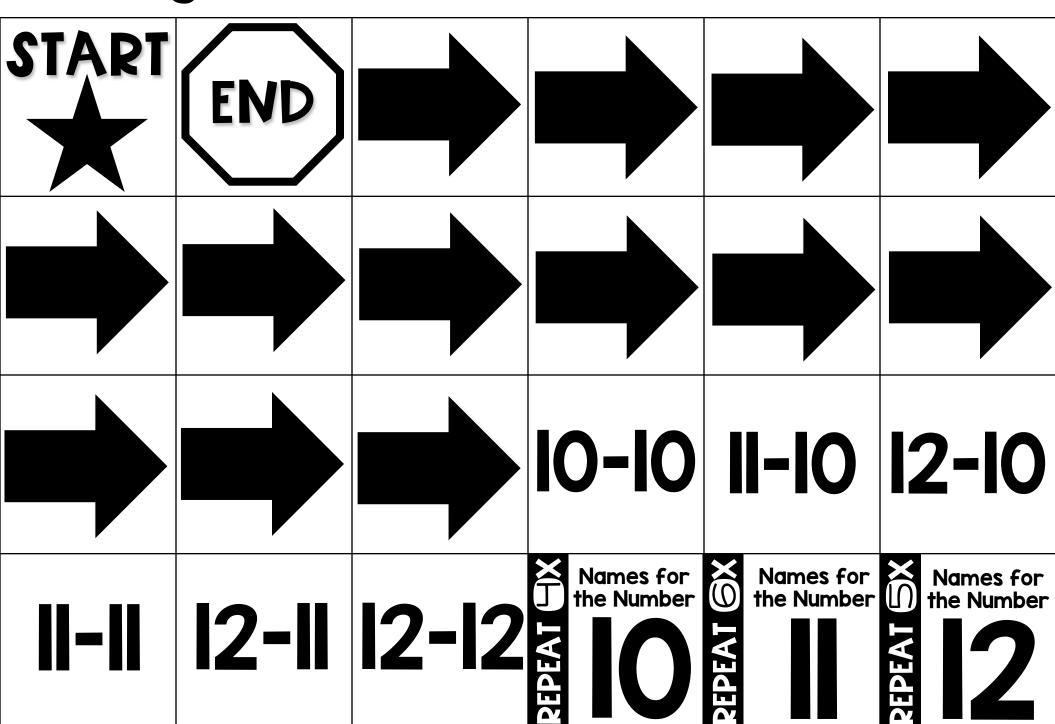
Coding Board Game Pieces: -6 and -7



Coding Board Game Pieces: -8 and -9



Coding Board Game Pieces: -10, -11, and -12



ANSWER KEY + LANSWER KE'

+ O = II

12 + 0 = 12

+2 ANSWER KEY +3 ANSWER KEY

+4 ANSWER KEY +5 ANSWER KEY

+6 ANSWER KEY +7 ANSWER KEY

+8 ANSWER KEY +9 ANSWER KEY

+IO ANSWER KEY +II ANSWER KEY

+12 ANSWER KEY

$$0 + 12 = 12$$

$$1 + 12 = 13$$

$$2 + |2 = |4|$$

$$3 + 12 = 15$$

$$4 + 12 = 16$$

$$5 + 12 = 17$$

$$6 + 12 = 18$$

$$7 + 12 = 19$$

$$8 + 12 = 20$$

$$q + |2 = 2|$$

$$10 + 12 = 22$$

-O ANSWER KEY -I ANSWER KEY

-2 ANSWER KEY -3 ANSWER KEY

$$2 - 2 = 0$$

$$3 - 2 = 1$$

$$5 - 2 = 3$$

$$6 - 2 = 4$$

$$7 - 2 = 5$$

$$8 - 2 = 6$$

$$q - 2 = 7$$

$$10 - 2 = 8$$

$$\| - 2 = q \|$$

$$12 - 2 = 10$$

$$3 - 3 = 0$$

$$4 - 3 = 1$$

$$5 - 3 = 2$$

$$6 - 3 = 3$$

$$7 - 3 = 4$$

$$8 - 3 = 5$$

$$q - 3 = 6$$

$$10 - 3 = 7$$

$$\| - 3 = 8 \|$$

$$12 - 3 = 9$$

-4 ANSWER KEY -5 ANSWER KEY

-6 ANSWER KEY -7 ANSWER KEY

$$6 - 6 = 0$$
 $7 - 6 = 1$
 $8 - 6 = 2$
 $9 - 6 = 3$
 $10 - 6 = 4$
 $11 - 6 = 5$
 $12 - 6 = 6$

$$8 - 8 = 0$$
 $9 - 8 = 1$
 $10 - 8 = 2$
 $11 - 8 = 3$
 $12 - 8 = 4$

CREDITS
Thank you for your download!
Created by Brooke Brown
Interested in More Elementary
Unplugged coding products?

Click Here!







