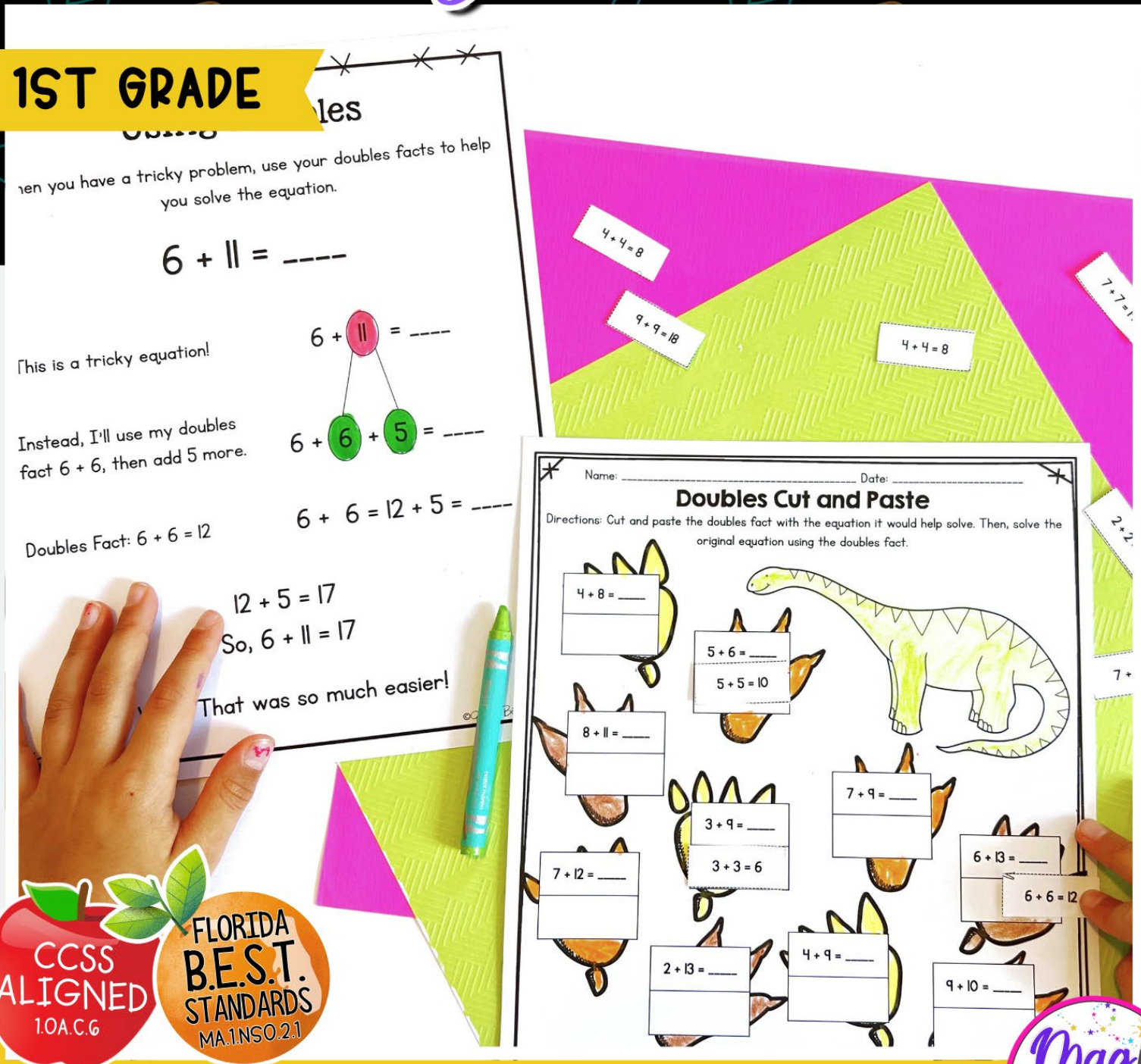
ADD & SUBTRACT WITHIN 20

Fluency within 10

1ST GRADE

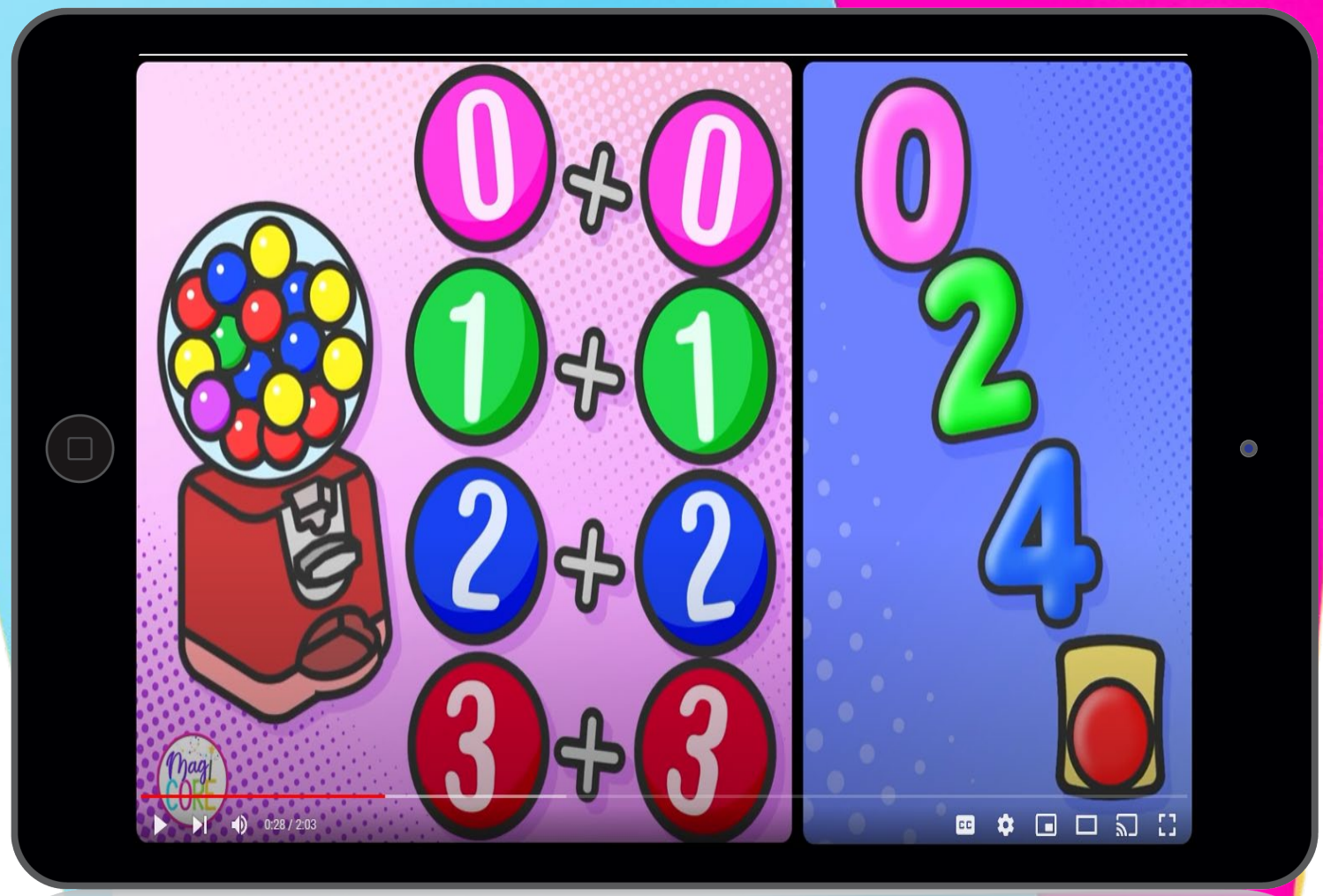


CCSS ALIGNED 1.OA.C.6

FLORIDA B.E.S.T. STANDARDS MA.1.NSO.2.1

COMPLETE UNIT INCLUDES VIDEO SONG, ANCHOR CHARTS, WORKSHEETS, CENTERS, & ASSESSMENT

Magi CORE



Make Learning Fun!
Original song and video to introduce and reinforce the skill.


Name:
Date:
Build to 10 Pumpkin Patch
Directions: Look at the equation. Write and solve the new equation using the "Build to 10" strategy.
Pumpkin Patch
4 + 8 = ___
___ + ___ = ___
6 + 7 = ___
___ + ___ = ___
8 + 9 = ___
___ + ___ = ___
9 + 6 = ___
___ + ___
Name:
Date:
Down to 10 Silly Monkeys
Directions: Look at the equation. Write and solve a new equation using the "Dow
10" strategy.
14 - 8 = ___
4 4
10 - 4 = 6
17 - 15 = ___
___ - ___ = ___
11 - 5 = ___
___ - ___ = ___
12 - 3 = ___
___ - ___ = ___
13 - 9 = ___
___ - ___ = ___
20 - 12 = ___
___ - ___ = ___
17 - 11 = ___
___ -
o "10"
action can be tricky.
r by "sliding down to 10."
up the nu
, take off
iggest num
16 - 9 = -
6
16 - 6 = 10
16 - 9 =
16 - 6 = 10

Doubles Cut and Paste
Name _____ Date _____
Directions: Cut and paste the doubles fact with the equation it would help solve. Then, solve the original equation using the doubles fact.
4 + 8 = ___
5 + 6 = ___
5 + 5 = 10
7 + 4 = ___
6 + 6 = ___
6 + 8 = ___
7 + 7 = 14

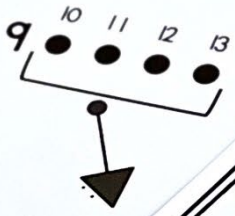
Unknown Number: Count On

When we have an unknown number in an equation, we can Count On to find the missing number!

9 + ☐ = 13

1. Put the smallest number in your head.

Count up to the biggest ber, the whole.



hen you get to t number. The counted is the r.

The mis

9 + 4 = 1

Name: _____ Date: _____

Count On

Directions: Solve for the missing number by using the count on strategy using just your brain. Once you solve for the missing number, write it in the equation.

13 + ___ = 18

___ + 6 = 14

12 - ___ = 4

17 - ___ = 8

4 + ___ = 18

___ + 16 = 20

2 + ___ = 11

16 - ___ = 5

11 + ___ = 15

ADD AND SUBTRACT WITHIN 20

Fluently within 10

1. Pedagogy
2. Lesson Plans
3. Vocabulary Cards
4. Facts within 10 Print-Offs
5. Facts within 10 Flashcards
6. Anchor Chart: Count On
7. Count On Worksheet
8. Anchor Chart: Build to 10
9. Build to 10 Envelope Activity
10. Build to 10 Worksheet
11. Anchor Chart: Down to 10
12. Anchor Chart: Fact Families
13. Properties of Operations Song
14. Fact Family Model Problem
15. Fact Families Game
16. Fact Family Connect Worksheet
17. Doubles to 10 Print-Offs
18. Doubles Flashcards
19. Doubles Rap Song
20. Anchor Chart: Using Doubles
21. Doubles Cut and Paste Worksheet
22. Mini-Book
23. There and Back Again Board Game
24. Problem Solver
25. Written Quiz
26. Oral Quiz

Add and Subtract Within 20

Adding and subtracting within 20 is a core pillar of math progression and forward development. With this standard comes the need to know the facts within 10 fluently. The focus of this standard is developing advanced strategies so students can solve addition and subtraction equations with increased efficiency. The goal is to increase mental math capabilities, so students can more readily tackle complex math problems and expand upon the difficulty of addition and subtraction equations.

In this unit, students will be primarily reviewing strategies taught explicitly and individually in previous units. With that in mind, it would be recommended to teach the following units, prior to this unit: Unknown Number, Properties of Operations, and Relating Addition and Subtraction. These units focus explicitly on teaching strategies that will be utilized broadly throughout this unit. However, this unit is written so that if it is taught prior to the aforementioned units, it will still be effective and logical. Specifically, this unit will focus on strengthening student skills in counting on, building 10, going down to 10, fact families, and using known sums such as doubles and near doubles facts.

Students will be able to evaluate an equation and determine the best strategy to use to solve it. With this evaluation, students should also be able to explain their rationale for selecting a specific strategy. Students will also be able to utilize mental math strategies to simplify equations and efficiently solve them.

Add and Subtract Within 20

Day 1: Introduce adding and subtracting within 20, fluently within 10; developing efficiency

Mini Lesson: Introduce the purpose of the lesson today: Adding and subtracting within 10 fluently.

- Show students the unit vocabulary cards. Tell the students the meaning of each term.
- Introduce the "Facts to 10" print-off and hand out a copy to each student. Let them know that this is their copy to keep and that at the beginning of each lesson in this unit, we will be practicing our "Facts to 10" so we can become fluent. Students can also take these print-offs home to practice.
- Let students know that memorizing addition and subtraction facts within 10 will make their mental math more efficient and will make lots of other equations easier.
- Show students an already prepared deck of "Facts to 10 Flashcards."
- With a student partner, model how to play "Facts to 10 Flashcards." Let students know that they will be cutting out and assembling their own flashcards today.

Guided Practice: Pass out the "Facts to 10 Flashcards" print-offs to each student. Make sure each student has a pair of scissors and a Ziploc bag. Have students cut out all their flashcards, write their names on the back of each card, and place them in their Ziploc bags.

Independent Practice: Once students are finished prepping their flashcards. Pair students up and have them quiz each other on their "Facts to 10 Flashcards."

Day 2: Adding and subtracting within 20, fluently within 10; counting on

Mini Lesson: Introduce the purpose of the lesson today: to add using "counting on."

- Show students the unit vocabulary cards. Tell the students the meaning of each term.
- Take 5 minutes to have students play "Facts to 10 Flashcards" in their pairs from the day before.
- Review the unit vocabulary cards.

Day 2 continued . . .

Mini-Lesson continued:

- Introduce the "Counting On" anchor chart, while also modeling the strategy. Review the equation on the chart.
    - *If you have taught the Unknown Number Unit, this anchor chart will be a review.*
- If the "Count On" strategy is a review, write an equation up on the board and ask a student to come up and explain how to count on to solve the equation.
- If the "Count On" strategy is NOT A REVIEW, model how to solve both addition and subtraction, using counting on with manipulatives. Be sure to stress that, no matter the equation (subtraction or addition), they need to start at the smallest number and count on from there.

Guided Practice: Pass out manipulatives to each student. Write up 2 equations on the board for the class to solve using the Count On strategy with manipulatives. After the class has worked through these 2 equations, collect all the manipulatives. Write out 2 more equations on the board. As a class, solve these two equations by drawing circles instead of using manipulatives.

Independent Practice: Students work on the Count On worksheet.

Day 3: Adding and subtracting within 20, fluently within 10; building to 10

Mini Lesson: Introduce the purpose of the lesson today: Build to 10

- Review the unit vocabulary.
- Take 5 minutes to have students play "Facts to 10 Flashcards" in pairs.
- Introduce the "Build to 10" anchor chart, while also modeling the strategy. Review the equation on the anchor chart.
    - *If you taught the Relating Addition and Subtraction Unit, this anchor chart will be a review.*
- If the "Build to 10" strategy is a review, write up an equation on the board and ask a student to come up and explain how to build 10 to help solve the equation.
- If the "Build to 10" strategy is NOT A REVIEW, model how to simplify an equation by making a 10 with 2-3 equations.

Day 3 continued . . .

Guided Practice: Place students in small groups of 3-4. Pass out a "Build 10 Envelope" to each group. Each envelope should have 5 equations in it on paper strips. As a group, students race to solve each equation, showing their work of building 10 on the paper strip. When a group finishes an equation, they have to run it up to you one at a time. The first team to have run all 5 of their completed build 10 equations up to you wins.

Independent Practice: Students work on their "Build to 10" worksheets.

Day 4: Adding and subtracting within 20, fluently within 10, down to 10

Mini Lesson: Introduce the purpose of the lesson today: Down to 10

- Review the unit vocabulary.
- Review "Facts to 10 Flashcards" Whole Group.
- Introduce the "Down to 10" anchor chart, while also modeling the strategy. Review the equation on the anchor chart.
    - *If you taught the Relating Addition and Subtraction Unit, this anchor chart will be a review.*
- If the "Down to 10" strategy is a review, write up an equation on the board and ask a student to come up and explain how to go down to 10 to help solve the equation.
- If the "Down to 10" strategy is NOT A REVIEW, model how to simplify an equation by going down to a 10 with 2-3 equations.

Guided Practice: Write out several subtraction equations on the board. As a class, work together to solve by working down to 10. Have students explain the process to support understanding.

Independent Practice: Students work on their "Down to 10" worksheets.

Day 5: Adding and subtracting within 20, fluently within 10, Fact Families

Mini Lesson: Introduce the purpose of the lesson today: Fact Families

- Review the unit vocabulary.
- Review "Facts to 10 Flashcards" whole group.
- Introduce the "Fact Families" anchor chart. Review the fact family on the anchor chart. Be sure to highlight the connection between addition and subtraction facts.
    - If you know 5 + 4 = 9, then you also know 4 + 5 = 9, 9 - 5 = 4, and 9 - 4 = 5.
    - *If you taught the Property of Operations Unit, this anchor chart will be a review.*
- Watch the Property of Operations Song
- If "Fact Families" are a review, draw or project the "Fact Family Model" up on the board. Ask students to explain the fact family and how to complete it.
- If the "Fact Families" are NOT A REVIEW, model how to complete a fact family, the connection between all the equations, and how knowing one equation helps you know all the others.

Guided Practice: Teach the "Fact Families Game" from the Property of Operations Unit. Have students work in small groups to complete the game.

Independent Practice: Students work on their Fact Family worksheets.

Day 6: Adding and subtracting within 20, fluently within 10, using known sums

Mini Lesson: Introduce the purpose of the lesson today: Using doubles facts

- Review the unit vocabulary.
- Introduce the "Doubles Facts" print-offs. Pass out a copy to each student to keep and take home.
- Go through all the doubles facts on the print-off and explain to students that doubles facts are easy to remember, and that knowing our doubles facts can make solving equations even easier.
- Listen to the Doubles song
- Show students an already prepared deck of "Doubles Flashcards."
- With a student partner, model how to play "Doubles Flashcards." Remind students of their "Facts to 10 Flashcards" and that this game is the same, but with doubles facts. Let students know that they will be cutting out and assembling their own flashcards today.

Day 6 continued . . .

Guided Practice: Pass out the "Doubles Flashcards" print-offs to each student. Make sure each student has a pair of scissors and a Ziploc bag. Have students cut out all their flashcards, write their names on the back of each card, and place them in their Ziploc bags.

Independent Practice: Once students are finished prepping their flashcards, pair them up and have them quiz each other on their "Doubles Flashcards."

Day 7: Adding and subtracting within 20, fluently within 10, using known sums

Mini Lesson: Introduce the purpose of the lesson today: Using doubles facts

- Review the unit vocabulary and listen to the Doubles song.
- Take 5 minutes to have students play "Doubles Flashcards" in pairs.
- Introduce the "Using Doubles" anchor chart. Model the equation on the chart and narrate how 7 + 9 is tricky, so instead you know 7 + 7 is 14; that just leaves you with 2 left over from 9, so you just add 2 more to 14.
- Model a few more equations, using a doubles fact to help you solve the equation.

Guided Practice: Write up several equations on the board. As a class, work together to identify what doubles facts would be helpful in solving each equation. Then, solve the equation. Students can use their "Doubles Facts" print-offs to help them.

Independent Practice: Students work on their Doubles worksheets.

Day 8: Adding and subtracting within 20, fluently within 10, using known sums

Mini Lesson: Introduce the purpose of the lesson today: Using near doubles facts/doubles +1

- Review the unit vocabulary and the **Doubles song.**
- Take 5 minutes to have students play "Doubles Flashcards" in pairs.
- Review the "Using Doubles" anchor chart.
- Introduce the concept of "Near Doubles" or "Doubles +1." Write up the equation 8 + 9. Explain that you already know your doubles facts of 8 + 8 = 16, and 9 is one more than 8, so 8 + 9 must be 17. It is a doubles equation +1; 8 + 8 + 1 = 17.
- Model 2-3 more near doubles equations, narrating your thinking as you solve the equations.

Day 8 continued . . .

Guided Practice: Show students the Doubles and Near Doubles Mini-Book.

Independent Practice: Students work on their mini-books.

Day 9: Review Adding and subtracting within 20, fluently within 10

Mini Lesson: Introduce the purpose of the lesson today: Review strategies for adding and subtracting within 20.

- Review the unit vocabulary.
- Review "Facts to 10 Flashcards" and "Doubles Flashcards" whole group.
- Review the following anchor charts: Count on, Build to 10, Down to 10, Fact Families, and Using Doubles.
- Remind students that they now know many strategies for adding and subtracting within 20 and they can use all of these strategies.

Guided Practice: Teach students the review game, There and Back Again.

Independent Practice: When students are finished with the game, they can begin working on their problem solver.

**As you will see on Day 10, there is a written and oral assessment. The oral assessment is testing simple fluency of facts to 10. While students are playing the game and completing their problem solvers, this might be a good time to pull some students for oral assessment.*

Day 10: Adding and subtracting within 20, fluently within 10

Mini Lesson: Introduce the purpose of the lesson today: Adding and subtracting within 20.

- Review the unit vocabulary.
- Review the following anchor charts: Count on, Build to 10, Down to 10, Fact Families, and Using Doubles.

Independent Practice: Adding and Subtracting within 20 Quiz and Oral Assessment. As students finish their written quiz, transition them to the review game from the day before. During this time, you can pull students for the oral assessment on facts to 10 fluency.

Addition Facts within 10

1 + 1 = 2	2 + 6 = 8
1 + 2 = 3	2 + 7 = 9
1 + 3 = 4	2 + 8 = 10
1 + 4 = 5	3 + 3 = 6
1 + 5 = 6	3 + 4 = 7
1 + 6 = 7	3 + 5 = 8
1 + 7 = 8	3 + 6 = 9
1 + 8 = 9	3 + 7 = 10
1 + 9 = 10	4 + 4 = 8
2 + 2 = 4	4 + 5 = 9
2 + 3 = 5	4 + 6 = 10
2 + 4 = 6	5 + 5 = 10

10 - 8 = 2	8 - 6 = 2
10 - 7 = 3	8 - 5 = 3
10 - 6 = 4	7 - 5 = 2
9 - 5 = 4	7 - 4 = 3
9 - 6 = 3	6 - 4 = 2
9 - 2 = 7	6 - 3 = 3

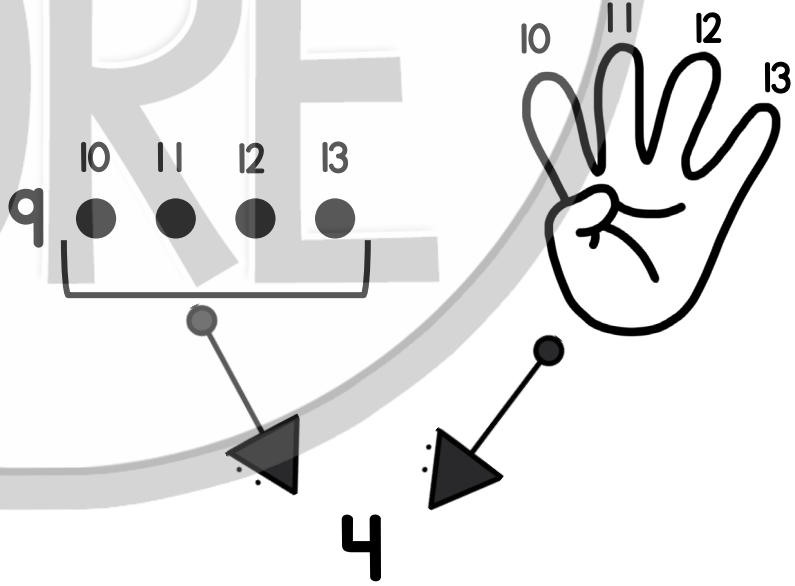
Unknown Number: Count On

When we have an unknown number in an equation, we can Count On to find the missing number!

$$9 + \square = 13$$

1. Put the smallest number in your head.

2. Count up to the biggest number, the whole.



3. Stop when you get to the biggest number. The number you counted is the missing number.

4

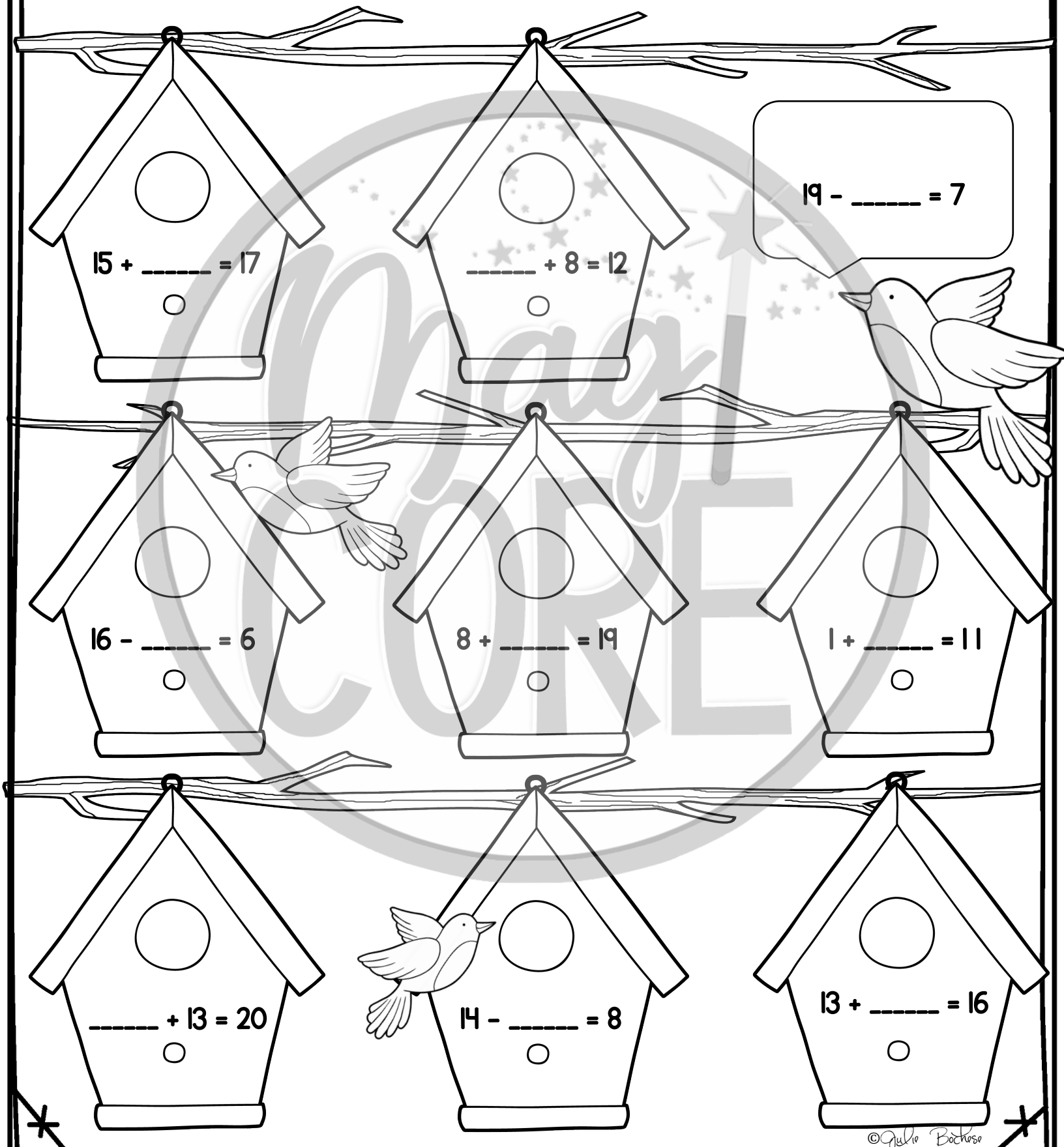
The missing number is 4.

$$9 + \boxed{4} = 13$$ ✓

Name: _____ Date: _____

Count On

Directions: Solve for the missing number by using the count on strategy using just your brain. Once you solve for the missing number, write it in the equation.



Build to "10"

Addition and subtraction can be tricky.

You can make it easier by "building to 10."

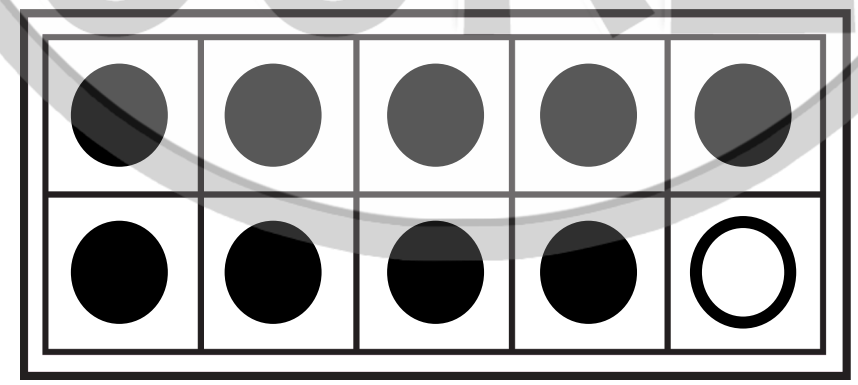
Break the number that is <u>less</u> into two parts.

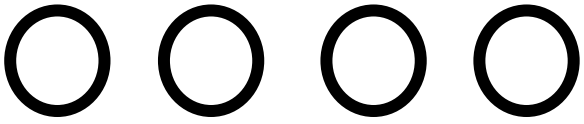
9 + 5 = ____

9 + 1 4

9 + 1 = 10 + 4 = 14

9 + 5 = ____





9 + 1 = 10

10 + 4 = 14

Name: _____ Date: _____

Build to 10 Pumpkin Patch

Directions: Look at the equation. Write and solve the new equation using the "Build to 10" strategy.

4 + 8 = ____

____ + ____ = ____

7 + 7 = ____

____ + ____ = ____

6 + 7 = ____

____ + ____ = ____

9 + 9 = ____

____ + ____ = ____

8 + 5 = ____

____ + ____ = ____

8 + 9 = ____

____ + ____ = ____

4 + 7 = ____

____ + ____ = ____

9 + 6 = ____

____ + ____ = ____

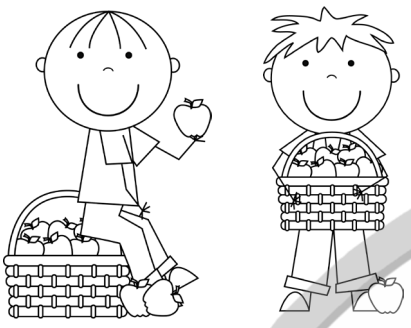
5 + 8 = ____

____ + ____ = ____

Name: _____ Date: _____

Build to 10 Orchard

Directions: Look at the equation. Write and solve the new equation using the "Build to 10" strategy.



7 + 9 = ____

____ + ____ = ____

7 + 5 = ____

____ + ____ = ____

6 + 8 = ____

____ + ____ = ____

9 + 9 = ____

____ + ____ = ____

8 + 5 = ____

____ + ____ = ____

5 + 6 = ____

____ + ____ = ____

8 + 4 = ____

____ + ____ = ____

9 + 8 = ____

____ + ____ = ____

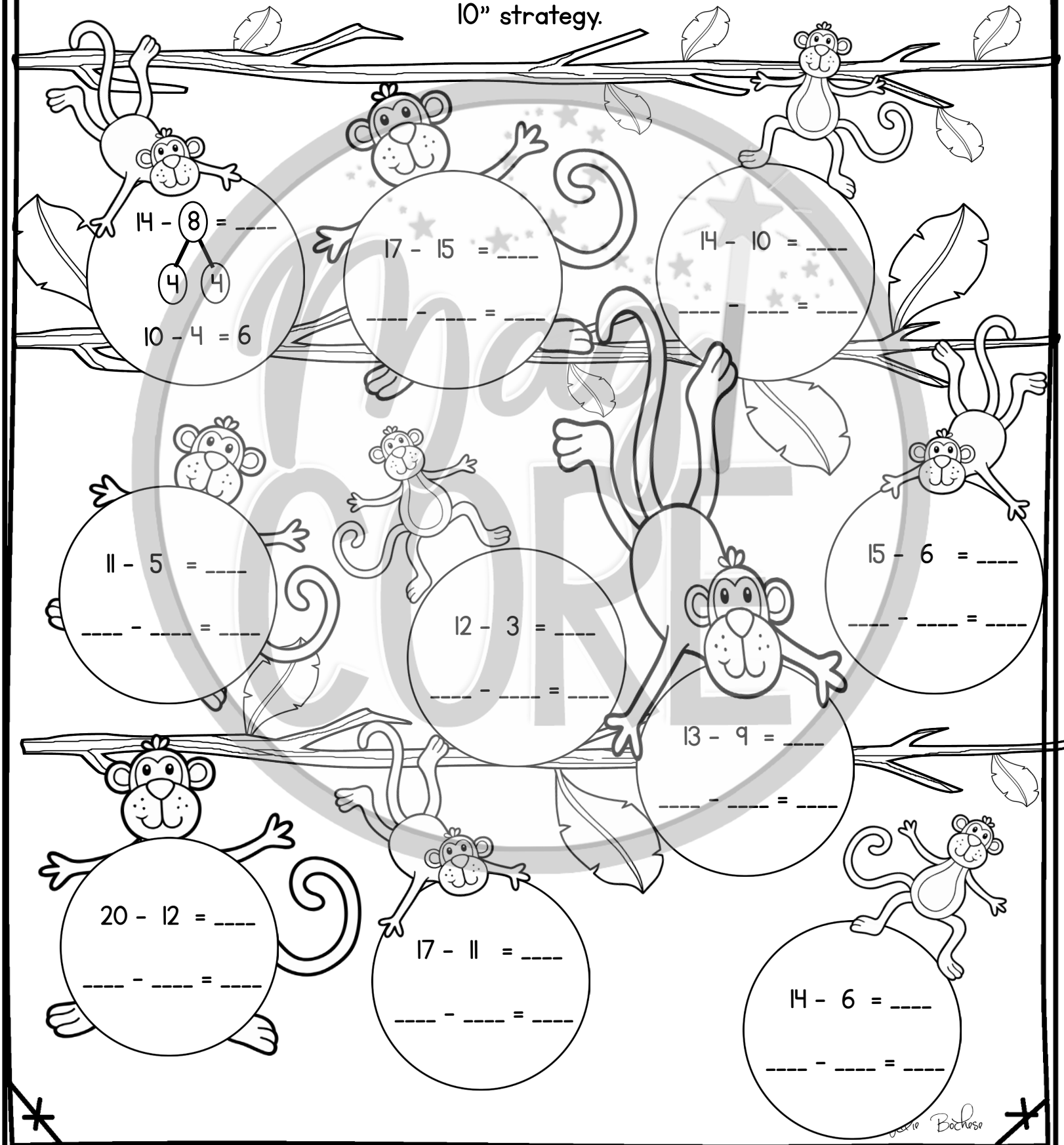
9 + 3 = ____

____ + ____ = ____

Name: _____ Date: _____

Down to 10 Silly Monkeys

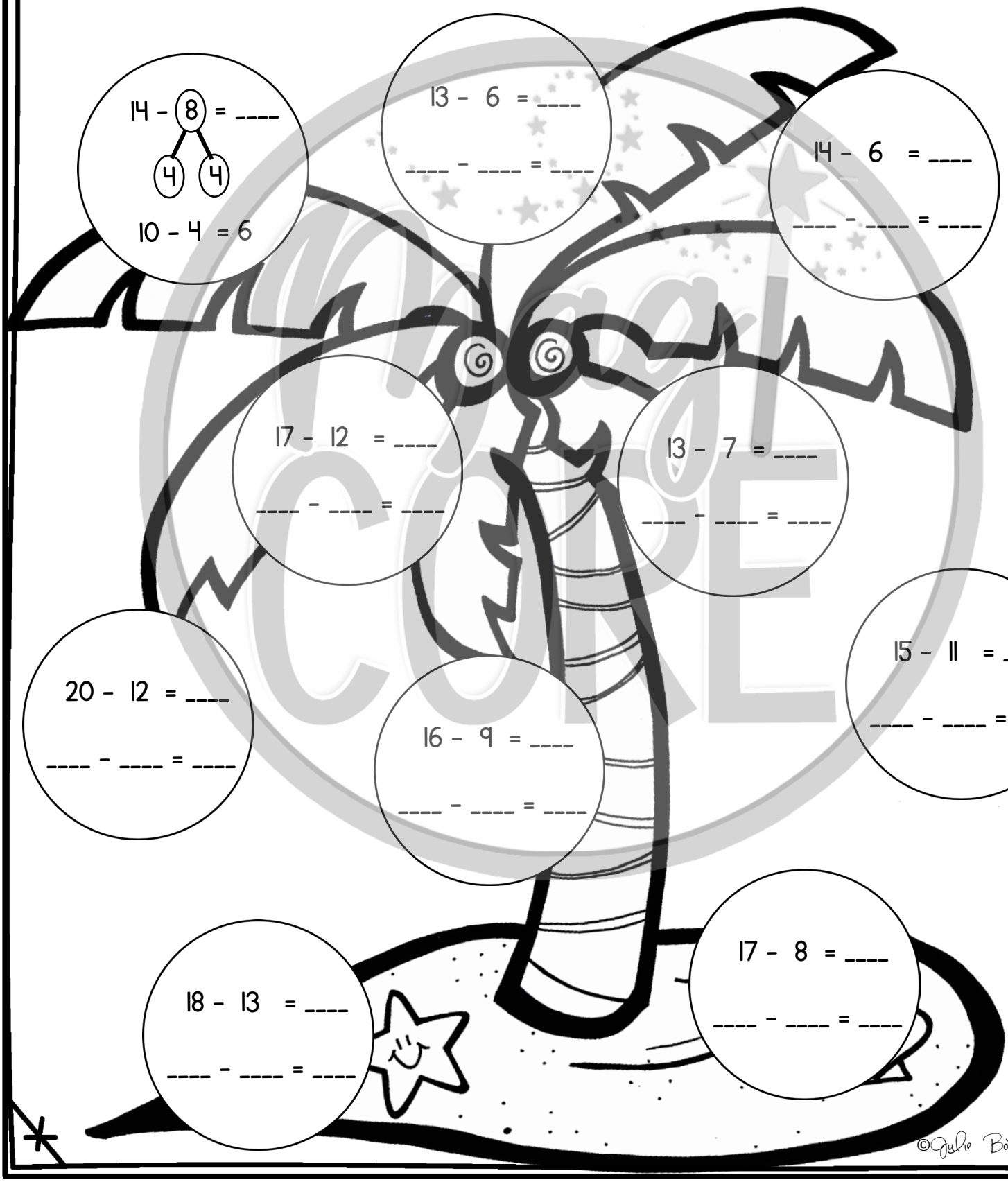
Directions: Look at the equation. Write and solve a new equation using the "Down to 10" strategy.



Name: _____ Date: _____

Down to 10 Flying Coconuts

Directions: Look at the equation. Write and solve a new equation using the "Down to 10" strategy.



14 - 8 = ____

4 4

10 - 4 = 6

13 - 6 = ____

____ - ____ = ____

14 - 6 = ____

____ - ____ = ____

17 - 12 = ____

____ - ____ = ____

13 - 7 = ____

____ - ____ = ____

20 - 12 = ____

____ - ____ = ____

16 - 9 = ____

____ - ____ = ____

15 - 11 = ____

____ - ____ = ____

18 - 13 = ____

____ - ____ = ____

17 - 8 = ____

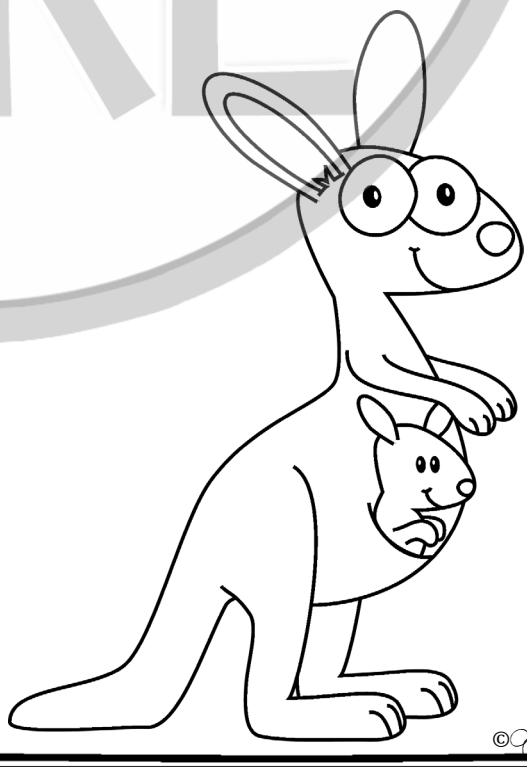
____ - ____ = ____

Properties of Operations

Numbers have properties
That make addition really easy
Numbers have properties
Let's add some right now

First you have the switcheroo or commutative
That's where numbers can switch the sides of the equation where they live
As long as you keep them the same, the sum is equal as well
Like 8 plus 4 or 4 plus 8 they will both add up to 12

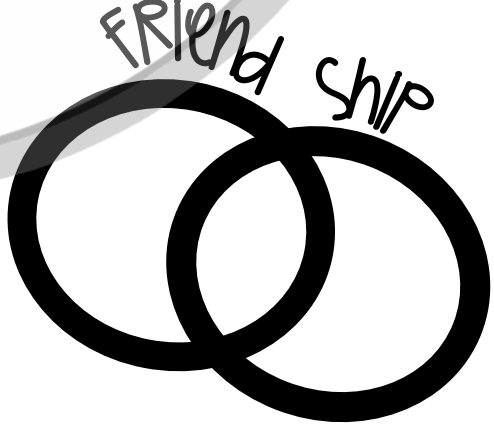
Numbers have properties
That make addition really easy
Numbers have properties
Let's add some more right now



Next you have the associative or
the property of friendship
No matter how you group them it's the same as long as no one is skipped
If you group 7 and 3 and add 5 you will get 15
And if you group 3 and 5 and add 7 the sum will be the same you see.

Numbers have properties
That make addition really easy
Numbers have properties
Like the switcheroo and friendship

Numbers have properties
That make addition really easy
Numbers have properties
Let's go add more right now



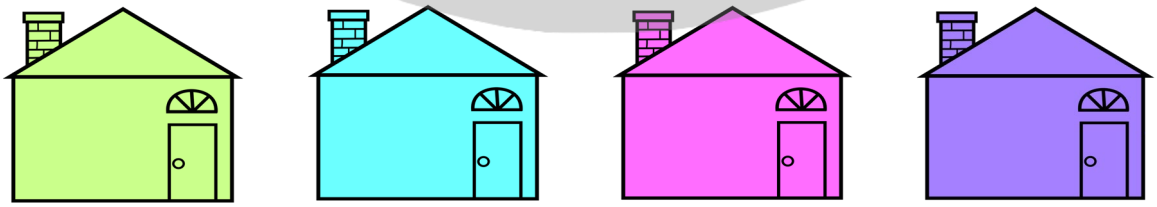
Fact Families Game

Directions:

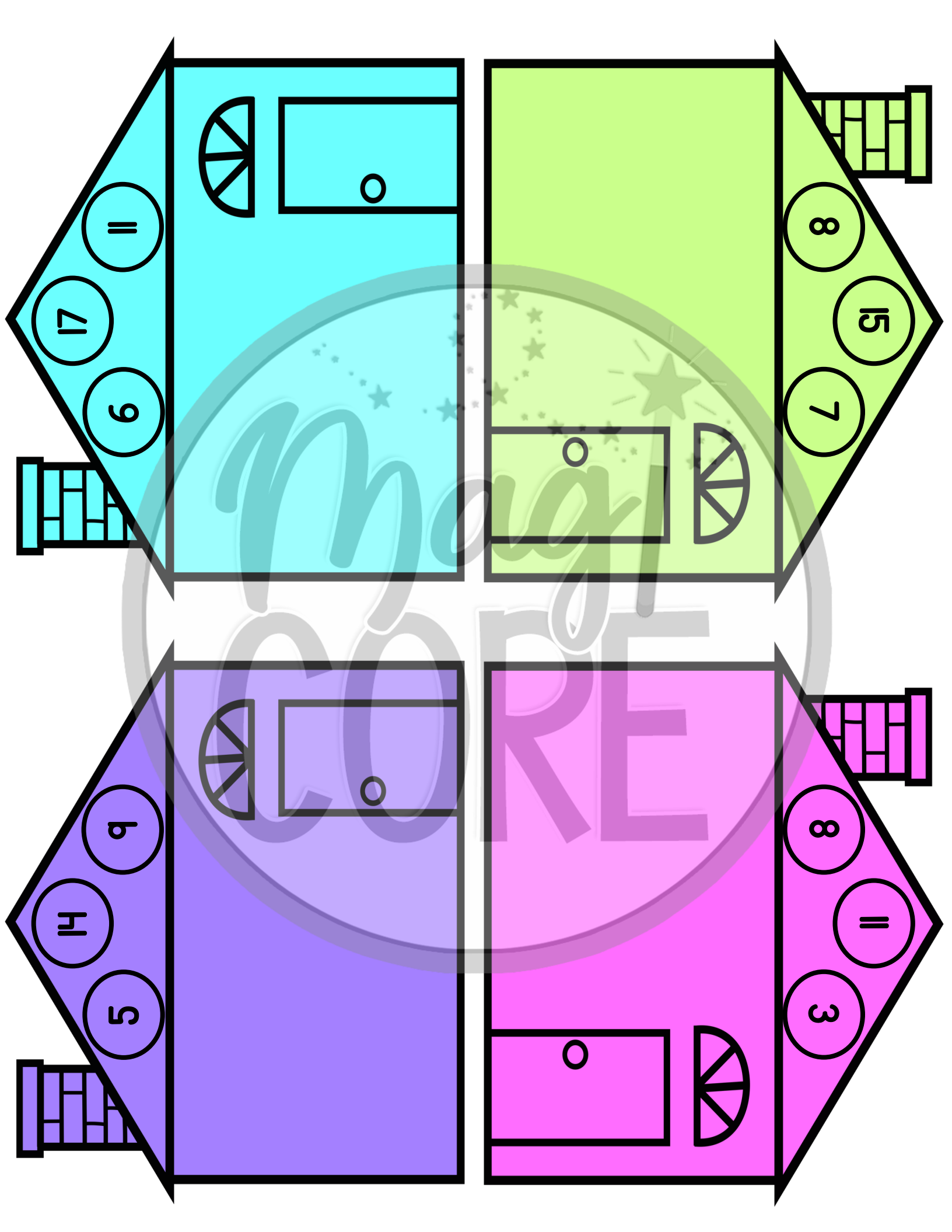
1. Print off the Fact Family Houses and equation cards.
2. Laminate and cut out.
3. Place all the Fact Family Houses and equation cards in a gallon-sized bag.
4. This game can be done individually or in pairs.

Label

Fact Families Game



Directions: Place the equations in their correct Fact Family house.


11
17
9
8
15
7
10
6
4
5
8
11
3

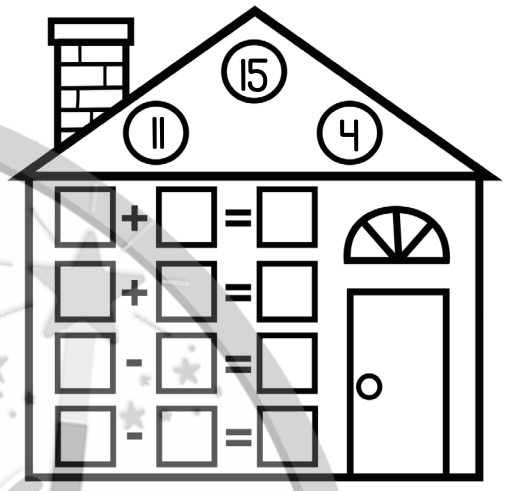
14 - 9 = 5	7 + 6 = 13
14 - 5 = 9	6 + 7 = 13
5 + 9 = 14	15 + 3 = 18
9 + 5 = 14	3 + 15 = 18
13 - 6 = 7	18 - 15 = 3
13 - 7 = 6	17 - 3 = 15

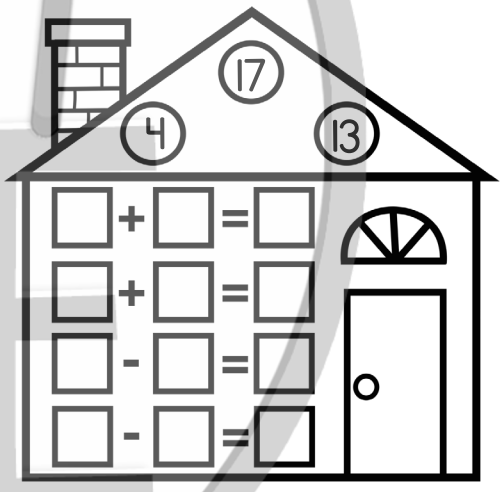
Name: _____ Date: _____

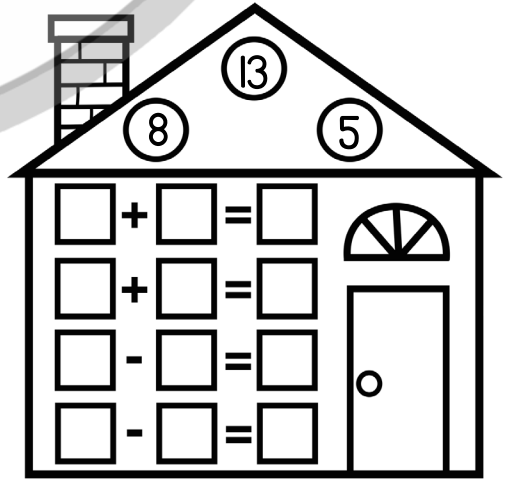
Fact Family Connect

Directions: Finish these Fact Families by connecting them to the right equations. Draw a line from the equation to its correct Fact Family.

1. 15 - 11 = 4
2. 8 + 5 = 13
3. 13 - 5 = 8
4. 4 + 11 = 15
5. 17 - 4 = 13
6. 11 + 4 = 15
7. 5 + 8 = 13
8. 13 + 4 = 17
9. 15 - 4 = 11
10. 13 - 8 = 5
11. 17 - 13 = 4
12. 4 + 13 = 17







Using Doubles

When you have a tricky problem, use your doubles facts to help you solve the equation.

$$6 + 11 = \_\_\_\_$$

This is a tricky equation!

$$6 + 11 = \_\_\_\_$$

Instead, I'll use my doubles fact 6 + 6, then add 5 more.

$$6 + 6 + 5 = \_\_\_\_$$

Doubles Fact: 6 + 6 = 12

$$6 + 6 = 12 + 5 = \_\_\_\_$$

$$12 + 5 = 17$$

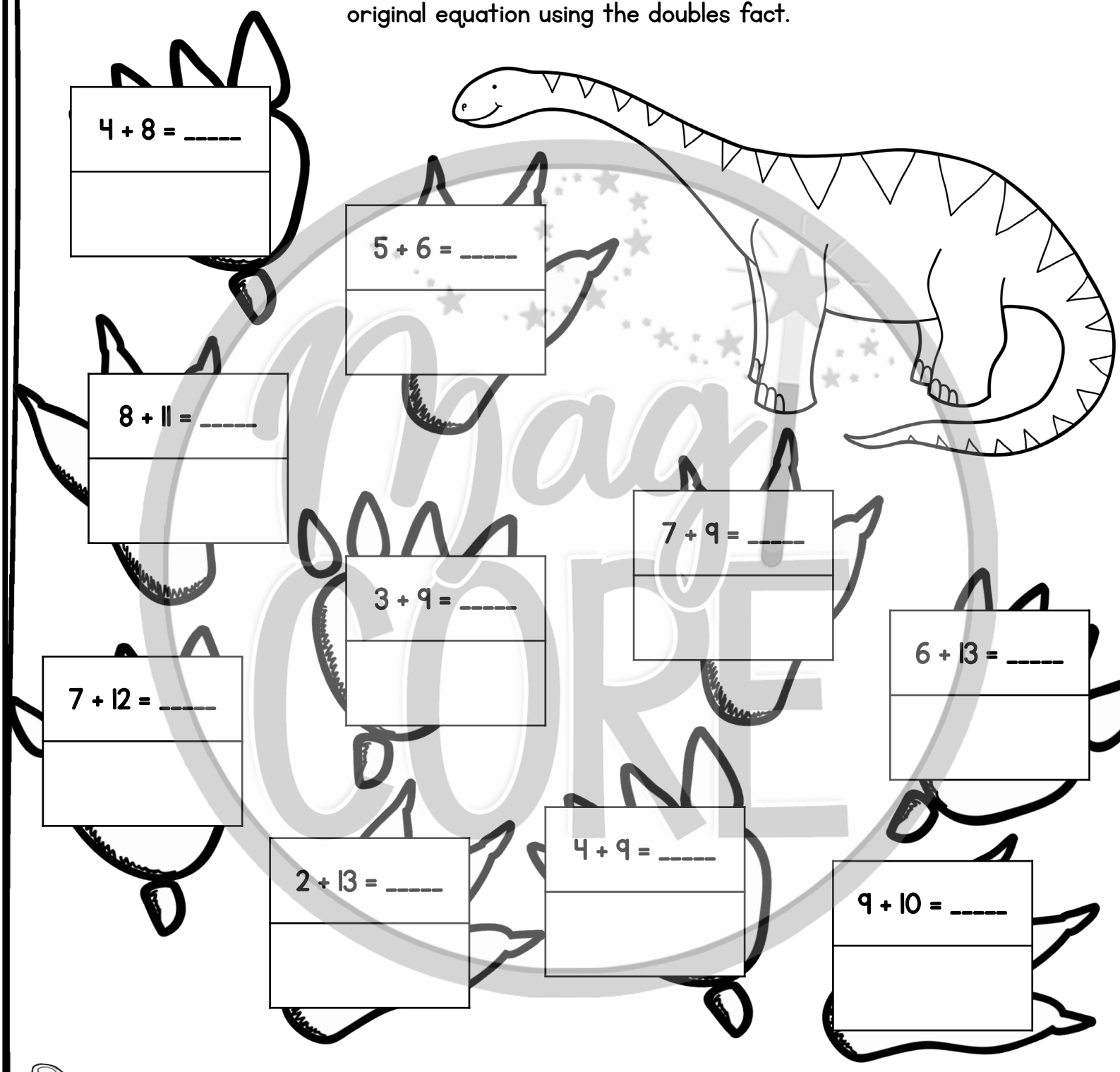
So, 6 + 11 = 17

Wow! That was so much easier!

Name: _____ Date: _____

Doubles Cut and Paste

Directions: Cut and paste the doubles fact with the equation it would help solve. Then, solve the original equation using the doubles fact.



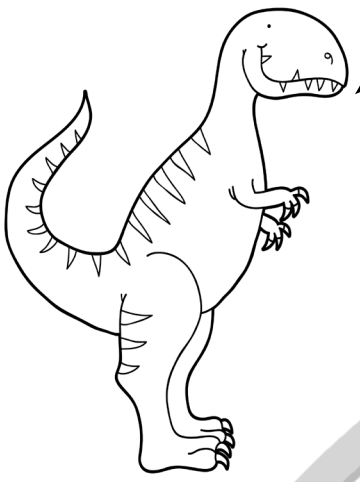
6 + 6 = 12	7 + 7 = 14	5 + 5 = 10	8 + 8 = 16	7 + 7 = 14
4 + 4 = 8	3 + 3 = 6	9 + 9 = 18	2 + 2 = 4	4 + 4 = 8

Doubles and Near Doubles

Known Sum Dinosaurs

By: _____

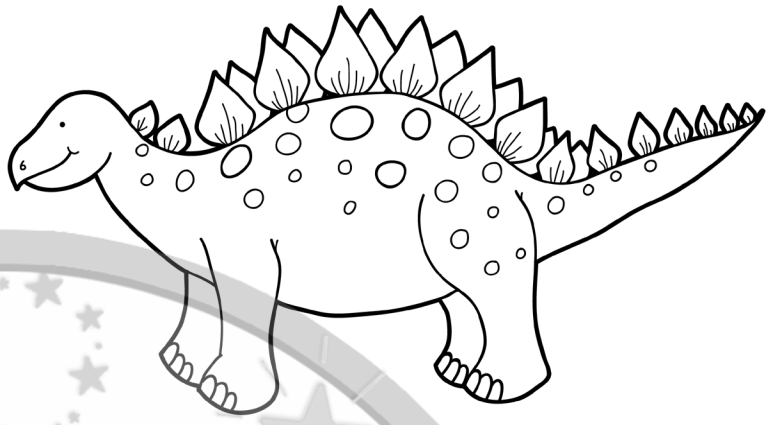
Date: _____



Draw a line to match the Doubles Fact with it's NEAR Doubles Fact.

Doubles Fact	NEAR Doubles Fact
1. 6 + 6 = 12	8 + 9 = 17
2. 4 + 4 = 8	6 + 7 = 13
3. 2 + 2 = 4	4 + 5 = 9
4. 7 + 7 = 14	5 + 6 = 11
5. 8 + 8 = 16	7 + 8 = 15
6. 5 + 5 = 10	2 + 3 = 5

Solve the equation using your DOUBLES FACTS.



1. 5 + 9 = ____

2. 7 + 11 = ____

3. 4 + 8 = ____

4. 6 + 13 = ____

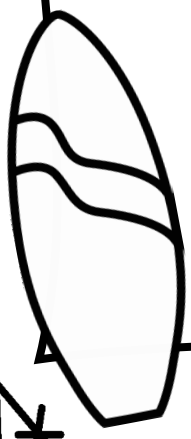
Name: _____ Date: _____

Problem Solver

Solve the word problems. Use any strategy you want to solve the equation.

1. Dana made 12 desserts for her guests. Many of her desserts were eaten. Now, Dana only has 4 desserts left. How many of Dana's desserts were eaten?

2. Isaac surfed for 8 minutes in the morning, and another 12 minutes in the afternoon. How many minutes did Isaac surf in all?



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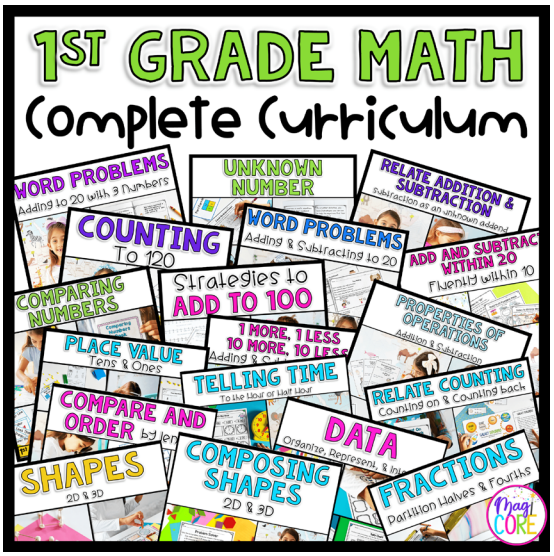

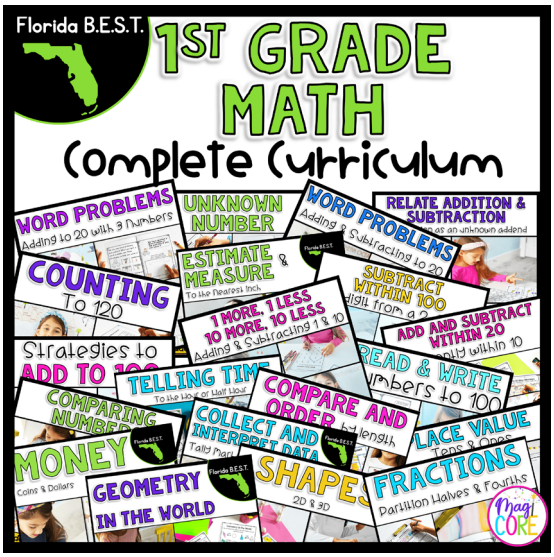

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