

Appendix A: Fact Masters - Addition

[OBJECTIVE]

The student will develop mastery of addition facts 0–18.

[PREREQUISITE SKILLS]

knowledge of the numbers 0 – 18

[MATERIALS]

Student pages **S292 – S300**

Transparencies **T887, T889, T890, T891, T892, T893, T899, T900, T904, and T905**

Copies of T902 or T903 on quiz days

Copies of T901 (each student needs 1 set of numbers)

Scissors

Fact Masters Curtain

Colored pencils

Gridded index cards

Beans (18 per student pair)

Cups (2 per student pair)

Hole punch

Paper clips

Masking tape

Phase 2 – **T899, T900, T904, T905, T906–T912, and T913**

[ESSENTIAL QUESTIONS]

1. How can addition facts be modeled using manipulatives?
2. What techniques can be used to practice addition facts?
3. Why is it important to be fluent in addition facts?

[WORDS FOR WORD WALL]

addend, sum

[GROUPING]

Cooperative Pairs (CP), Whole Group (WG), Individual (I)

*For Cooperative Pairs (CP) activities, assign the roles of Partner A and Partner B to students. This allows each student to be responsible for designated tasks within the lesson.

[LEVELS OF TEACHER SUPPORT]

Modeling (M), Guided Practice (GP), Independent Practice (IP)

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[MULTIPLE REPRESENTATIONS]

SOLVE, Graph, Verbal Description, Concrete Representation, Pictorial Representation
Graphic Organizer, Algebraic Formula

[*NOTE]

This lesson has two phases. Phase 1, which is intended to be presented in two days, models the instruction of addition facts from the concrete through the pictorial to the abstract. Phase 2 consists of the daily practice techniques and weekly assessment materials for Fact Masters.

The procedures and processes of the Fact Masters lesson have been specifically designed to scaffold student learning of addition facts. Following the outlined steps is crucial to the success of the program in facilitating student mastery.

[WARM-UP] (5 minutes – IP, I, WG) S292 (Answers on T886.)

- Have students turn to S292 in their books to begin the Warm-Up. Students will work with counting groups of objects. Monitor students to see if any of them need help during the Warm-Up. Give students 3 minutes to complete the problems and then spend 2 minutes reviewing the answers as a class. {Verbal Description, Pictorial Representation}

[HOMEWORK] (5 minutes)

Take time to go over the homework from the previous night.

[LESSON] Day 1: (60 minutes – M, GP, IP, CP, WG) Day 2: (60 minutes – M, GP, IP, CP, WG)**SOLVE Problem****(3 minutes – GP, WG) T887, S293 (Answers on T888.)**

Have students turn to S293 in their books, and place T887 on the overhead. The first problem is a SOLVE problem. You are only going to complete the S step with students at this point. Tell students that during the lesson they will learn how to model and practice addition facts for mastery. They will use this knowledge to complete this SOLVE problem at the end of the lesson. {SOLVE, Graphic Organizer}

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Items and Items – Concrete**(27 minutes – M, GP, IP, CP, WG) T887, T901, S293 (Answers on T888.)**

Separate students into their cooperative pairs. Assign the roles of Partner A and Partner B. Make sure that the students in each pair are seated beside each other for this activity so that each student has the same perspective. Use the following activity to help students model addition facts concretely. {**Concrete Representation, Verbal Description**}

MODELING**Items and Items – Concrete**

- Step 1:** Provide 2 cups, two sets of numbers from T901, and 18 beans to each pair of students. Have pairs label each of their cups “A” for “**addend**.” Have students cut out two sets of the numbers 0–9 from T901 and place one set in each cup (0–5 if you choose to work with smaller numbers first).
- Step 2:** Tell pairs that the partner sitting on the left, (Partner A), will place an “A” cup in front of him/her, and the partner sitting on the right, (Partner B), will place an “A” cup in front of him/her. Explain to students that the “A’s” will represent the number of beans they will place in their workspace.
- Step 3:** Explain to students that Partner A will first take a number from his/her “A” cup. This number will tell the pair how many beans Partner A will place on the table between the partners. Then, Partner B will choose a number from his/her “A” cup and place that amount of beans on the table beside Partner A’s beans. Next, students will push the beans together to get a **sum**, or the total amount of beans in the workspace. Then, students will put the number for each addend back into the correct cup.

Have students practice two examples of building sums. Have students in each pair randomly draw numbers from the labeled cups to indicate the number of beans for each addend.

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Step 4: Have students look at Recording Sheet 1 on S293. Tell students to write an "A" over each of the first two columns of squares. Demonstrate on the overhead, while students write on Recording Sheet.

Model the example of choosing a 2 from one "A" cup and putting the beans on the overhead. Then choosing a 3 from the other "A" cup and putting the 3 beans beside the 2 beans on the overhead. Record the numbers for the addends on Recording Sheet 1. Ask, "How many beans make up each addend?" (2 for the first, and 3 for the second) Push the beans together. Ask, "How many total beans are there?" (5) Record in the third square.

$$\begin{array}{cc} \text{A} & \text{A} \\ \boxed{2} & \boxed{3} & \boxed{5} \end{array}$$

Example:

For the remaining five problems on Recording Sheet 1, have students randomly draw numbers to write in the "A" squares. Have students represent each addend with beans and push the beans together to create the total number of beans. Then, have students write the sum in the third square. Make sure students return the numbers to the proper cups after each problem.

Practice with Wording of Items and Items (10 minutes – M, GP, IP, CP, WG)
T889, S294

Have students turn to S294 in their books, and place T889 on the overhead. Tell students to write an "A" over each of the first two columns to represent the addends. Model for students how to choose numbers randomly from both "A" cups, and then fill in the blanks for the first two examples in Recording Sheet 2.

Examples: 2 item(s) and 3 item(s) = 5

6 item(s) and 0 item(s) = 6

Have students complete the four remaining problems on Recording Sheet 2. {Verbal Description}

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Practice with the Addition Symbol (10 minutes – M, GP, IP, CP, WG) T890, S295

Have students turn to S295 in their books, and place T890 on the overhead. Have students write an "A" at the top of each of the first two columns to represent the addends. Model with students how to choose numbers randomly from the "A" cups and then fill in the blanks for the first example on Recording Sheet 3. Make sure students recognize the symbol "+" has replaced the word "and" and means "joining together, or adding."

Example: 2 item(s) + 3 item(s) = 5 item(s)

Have students complete the remaining five problems on Recording Sheet 3. {Verbal Description}

Practice with Addition Facts (10 minutes – M, GP, IP, CP, WG) T891, S296

Have students turn to S296 in their books, and place T891 on the overhead. Have students write an "A" above each of the first two columns of squares. Model with students how to choose numbers randomly from the "A" cups, write the numbers in the squares, and read the problem. The example below would be read as "four plus five equals a sum of nine," or " $4 + 5 = 9$."

$$\boxed{4} + \boxed{5} = \boxed{9}$$

Continue to have students practice, completing Recording Sheet 4. {Verbal Description}

-----Day 2 for Phase 1 -----

***Teacher Note: THERE IS NO WARM-UP FOR DAY 2. POST THE FACT MASTERS CURTAIN IN THE ROOM TO USE DURING DAY 2. WRITE A "+" SYMBOL ON AN INDEX CARD AND USE MASKING TAPE TO ATTACH IT TO THE TOP LEFT CORNER OF THE CURTAIN. THE FACT MASTER CURTAIN IS LABELED FROM 1-10 FOR MULTIPLICATION FACTS. FOR THIS LESSON WRITE THE DIGITS 0-9 ON INDEX CARDS AND TAPE OVER THE 1-10 DIGITS ON THE WALL CHART.**

Addition – Pictorial**(53 minutes – M, GP, IP, CP, WG) T892**

Pass out two gridded index cards and colored pencils to each cooperative pair of students, and place T892 on the overhead. Have pairs use the cups, numbers, and beans that they used in Day 1. Use the following activity to move students to the pictorial level of understanding addition facts. {Concrete Representation, Pictorial Representation, Verbal Description}

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MODELING

Addition – Pictorial

Step 1: Model with students how to represent the problem $2 + 3$ using the beans and the grid on T892 to form a picture. Have pairs use beans and a gridded index card to form the picture. Point out that your example shows a picture of $2 + 3$.



Step 2: Model with students how to create a pictorial representation of $2 + 3$ by shading the grid on T892, using different colors for each addend. For example, the first addend could be colored red, and the second addend could be colored blue.



Step 3: Model how to write the verbal description and number sentence at the top of the card. (2 items plus 3 items = 5 items; $2 + 3 = 5$)

Step 4: Ask one pair of students for their gridded card. (Check to make sure it is correct.) Model how to read the card: "2 items plus 3 items is equal to 5 items, or $2 + 3 = 5$." Publish the card by taping the card to the correct space on the Fact Masters curtain.

Step 5: Have pairs choose numbers randomly from their "A" cups and build the indicated number fact using beans and one of their gridded index cards. Have each pair shade their gridded index card to show their fact and write the number sentence at the top of the card. Have students come up in pairs to publish their card. Check each picture and fact as students come up to ensure that they are correct. Encourage students to offer positive feedback to their classmates for their work. After all student pairs have published index cards on the grid, there will be remaining spaces where no one has published. Assign spaces to different students and have them create the cards to correctly fill the spaces. If all spaces are not filled by the end of the lesson, use the grid as a center activity, supplying index cards, colored pencils, etc.

When this activity is completed, students have completed the concrete, pictorial, and abstract representations of the concept of addition.

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SOLVE Problem (5 minutes – GP, WG) T893, S297 (Answers on T894.)

Have students turn to S297 in their books, and place T893 on the overhead. Remind students that the SOLVE problem is the same one from the beginning of the lesson. Complete the SOLVE problem with your students. Ask them for possible connections from the SOLVE problem to the lesson. (The problem asks students to practice addition.) **{SOLVE, Verbal Description, Graphic Organizer, Algebraic Formula}**

If time permits... (10 minutes – IP, CP)

Have students make a list of where they will be using addition facts this year.

[CLOSURE] (2 minutes)

To wrap up the lesson, go back to the essential questions and discuss them with students.

- How can addition facts be modeled using manipulatives? (*building pictures, showing groups of items to read a fact correctly*)
- What techniques can be used to practice addition facts? (*building the facts using manipulatives*)
- Why is it important to be fluent in addition facts? (*to help when solving problems, especially word problems that involve addition facts*)

[HOMEWORK] Assign S298 for homework. (Answers on T895.)

[QUIZ ANSWERS] T896–T898

1. **A** 2. **C** 3. **D** 4. **C** 5. **C** 6. **B** 7. **A** 8. **C** 9. **B** 10. **C**

The quiz can be used at any time as extra homework or to see how students progress on the mastery of addition facts from 0 – 18.

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-----Phase 2-----

Fact Master Quiz**(Weekly, 6–8 minutes – M, GP, IP, WG)
T899, T900, T902–T905, S299, S300**

There are 2 quizzes, Form A on T902 and Form B on T903. A quiz is to be given each week, using alternating quizzes. The quizzes should be given on the same day each week at the same time. Make sure the students understand that these quizzes will not be used for a grade, but will be used instead to chart their progress with the addition facts. There is a record sheet for students to monitor their own progress on S299, T899.

On quiz day, have students take Quiz A or Quiz B, allotting them exactly two and a half minutes. Tell students to complete the facts they know first and then return to the facts they are unsure of or do not know. Upon completion of the quiz, have students highlight or circle the incorrect items, based on teacher-provided answers. Use Transparency T904 or T905 for students to correct their quizzes.

Students will then create a Fact Master Clip using index cards and a paper clip. Have students choose 10 or fewer facts from the highlighted facts on their quizzes. These will be their practice facts for the week. Have students write each practice fact on one side of an index card (e.g., “ $6 + 8 =$ ”) and then turn over the card and write the fact with its sum on the back (e.g., “ $6 + 8 = 14$ ”). Have students punch a hole in each card and attach them to the paper clip. Tell students that they can use these clips to practice the facts during any free time during the day. The fact paper clips can also be taken home. To practice facts, students should flip through them, saying the fact and immediately providing the sum. If students have difficulty, they should repeat the fact three times, then turn the card over and repeat the fact and the sum written on the back of the card three times. Students can also have another student or adult verbally quiz them on the facts.

Explain to students that when they believe they have mastered a fact, they may remove that fact from the clip and replace it with another fact chosen from the highlighted items on the quiz. Once a student believes that the fact has been mastered, that sum can be shaded in on the addition grid on S300, T900. Explain that if the student shades in the sum, that gives the teacher the right to assume the student has mastered the fact and can give the student the fact at any time and expect her/him to know it immediately. **{Verbal Description, Graph, Graphic Organizer}**

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Choral Drill**(Daily, 2–3 minutes – M, GP, WG) T906–T912**

A Fact Master Choral Drill CD or DVD is provided for your classroom. Each track is designed to last about 2–3 minutes. You may use this or choose to use the alternative method described at training. Pages for Choral Drill are found on T906–T912. {Verbal Description}

Certificate**(0–1 minute) T913**

The certificate is for the student who completes a certain percent of mastery on their quizzes. For example, the certificates may be given for 90% mastery for 2 consecutive weeks. The teacher may set the criteria on any level s/he sees fit. When students reach 100% accuracy, it is useful to challenge them to do so in shorter time periods (2 minutes, etc.). We suggest that teachers make two copies of the certificate—one for classroom display and the other to be taken home. Allow students time to color and decorate the certificate.

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Here is the key to **S292**.

Warm-Up

Directions: How many items are in each group?

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TRANSPARENCY MASTER for S293

Directions: Complete the following SOLVE problem with your teacher. You will only complete the S step.

Mark and Tamisha went to the mall. They had \$5.00 to spend. Mark bought 5 balloons and Tamisha bought 3 balloons. How many balloons did they buy?

S Underline the question.

This problem is asking me to find _____.

Recording Sheet 1

Directions: Complete the recording sheet below with your teacher and partner.

[illegible]

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Here is the key to **S293**.

Directions: Complete the following SOLVE problem with your teacher. You will only complete the S step.

Mark and Tamisha went to the mall. They had \$5.00 to spend. Mark bought 5 balloons and Tamisha bought 3 balloons. How many balloons did they buy?

S Underline the question.
This problem is asking me to find **the number of balloons Mark and Tamisha bought.**

Recording Sheet 1

Directions: Complete the recording sheet below with your teacher and partner.

<u>A</u>	<u>A</u>	
2	3	5

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TRANSPARENCY MASTER for S294

Recording Sheet 2

Directions: Complete the recording sheet below with your teacher and partner.

_____ item(s) and _____ item(s) = _____

_____ item(s) and _____ item(s) = _____

_____ item(s) and _____ item(s) = _____

_____ item(s) and _____ item(s) = _____

_____ item(s) and _____ item(s) = _____

_____ item(s) and _____ item(s) = _____

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TRANSPARENCY MASTER for S295

Directions: Complete the recording sheet below with your teacher and partner.

Recording Sheet 3

$$\underline{\hspace{2cm}} \text{ item(s)} + \underline{\hspace{2cm}} \text{ item(s)} = \boxed{\hspace{1cm}} \text{ item(s)}$$

$$\underline{\hspace{2cm}} \text{ item(s)} + \underline{\hspace{2cm}} \text{ item(s)} = \boxed{\hspace{1cm}} \text{ item(s)}$$

$$\underline{\hspace{2cm}} \text{ item(s)} + \underline{\hspace{2cm}} \text{ item(s)} = \boxed{\hspace{1cm}} \text{ item(s)}$$

$$\underline{\hspace{2cm}} \text{ item(s)} + \underline{\hspace{2cm}} \text{ item(s)} = \boxed{\hspace{1cm}} \text{ item(s)}$$

$$\underline{\hspace{2cm}} \text{ item(s)} + \underline{\hspace{2cm}} \text{ item(s)} = \boxed{\hspace{1cm}} \text{ item(s)}$$

$$\underline{\hspace{2cm}} \text{ item(s)} + \underline{\hspace{2cm}} \text{ item(s)} = \boxed{\hspace{1cm}} \text{ item(s)}$$

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TRANSPARENCY MASTER for S296

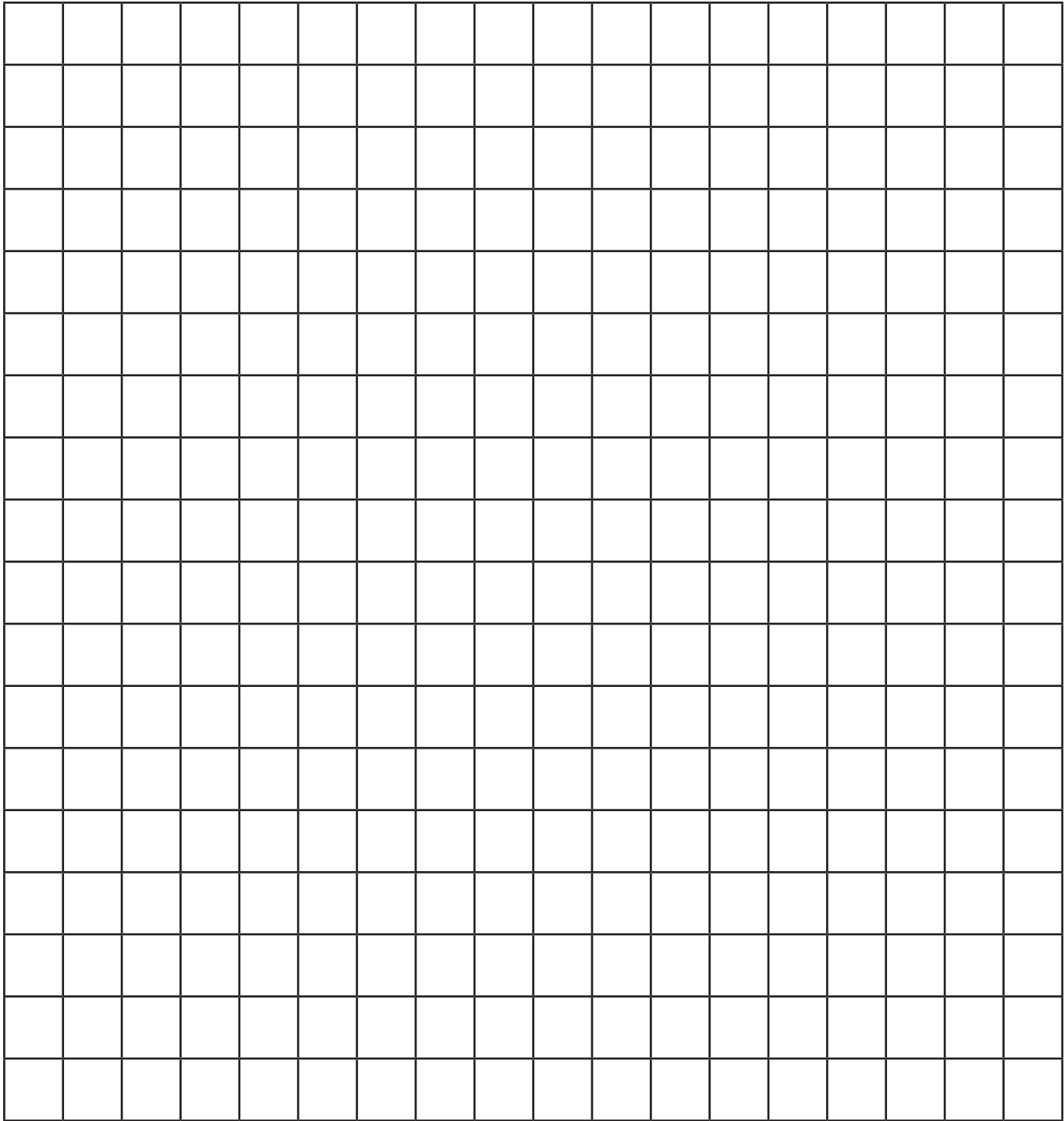
Directions: Complete the recording sheet below with your teacher and partner.

Recording Sheet 4

<div><div></div><div></div></div>	+	<div><div></div><div></div></div>	=	<div><div></div><div></div></div>
<div><div></div><div></div></div>	+	<div><div></div><div></div></div>	=	<div><div></div><div></div></div>
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Appendix A: Fact Masters - Addition

TRANSPARENCY MASTER



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TRANSPARENCY MASTER for S297

Directions: Complete the following SOLVE problem with your teacher.

Mark and Tamisha went to the mall. They had \$5.00 to spend. Mark bought 5 balloons and Tamisha bought 3 balloons. How many balloons did they buy?

S Underline the question.

This problem is asking me to find _____.

O Identify the facts.

Eliminate the unnecessary facts.

List the necessary facts.

L Choose an operation or operations.

Write in words what your plan of action will be.

V Estimate your answer.

Carry out your plan.

E Does your answer make sense? (Compare your answer to the question.)

Is your answer reasonable? (Compare your answer to the estimate.)

Is your answer accurate? (Check your work.)

Write your answer in a complete sentence.

Appendix A: Fact Masters - Addition

Here is the key to **S297**.

Directions: Complete the following SOLVE problem with your teacher.

~~Mark and Tamisha went to the mall. | They had \$5.00 to spend. | Mark bought 5 balloons and Tamisha bought 3 balloons. |~~ How many balloons did they buy?

S Underline the question.

This problem is asking me to find **the number of balloons Mark and Tamisha bought.**

O Identify the facts.

Eliminate the unnecessary facts.

List the necessary facts. **Mark bought 5 balloons, Tamisha bought 3 balloons**

L Choose an operation or operations. **Addition**

Write in words what your plan of action will be.

Add the number of balloons Mark bought and the number of balloons Tamisha bought.

V Estimate your answer. **about 6 balloons**

Carry out your plan. **$5 + 3 = 8$**

$5 + 3 = 8$ balloons

E Does your answer make sense? (Compare your answer to the question.) **Yes, because we are looking for the number of balloons Mark and Tamisha bought.**

Is your answer reasonable? (Compare your answer to the estimate.) **Yes, because it is close to the estimate of about 6 balloons.**

Is your answer accurate? (Check your work.) **Yes.**

Write your answer in a complete sentence. **Mark and Tamisha bought 8 balloons.**

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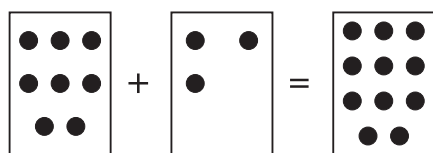
Here is the key to **S298**.

Homework

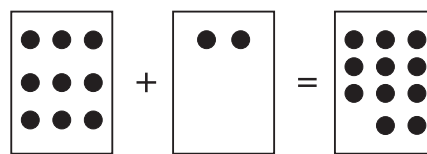
Name _____ Date _____

Directions: Draw pictures to show the following addition facts with the sum.

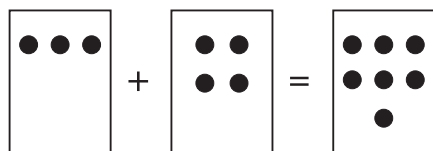
1. $8 + 3$



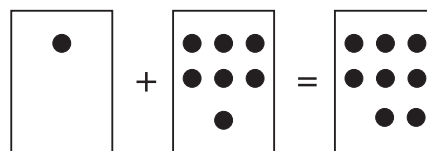
2. $9 + 2$



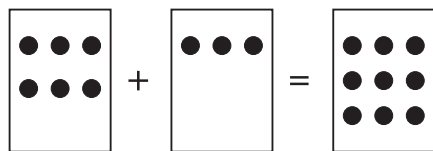
3. $3 + 4$



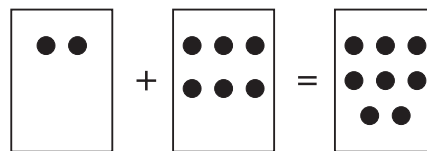
4. $1 + 7$



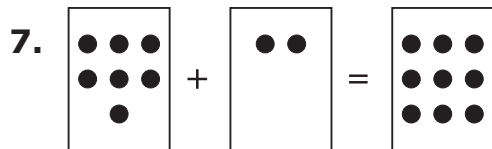
5. $6 + 3$



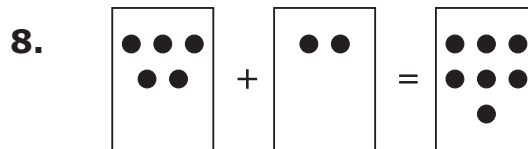
6. $2 + 6$



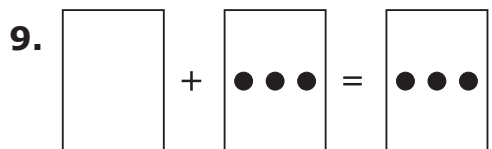
Directions: Write the addition fact for each of the following models.



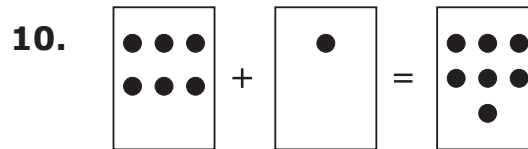
$7 + 2 = 9$



$5 + 2 = 7$



$0 + 3 = 3$

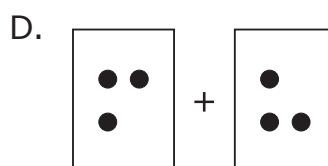
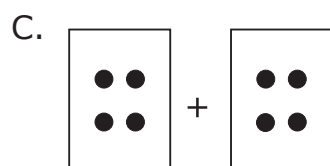
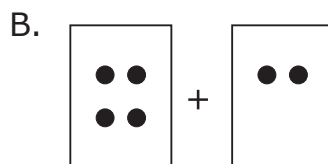
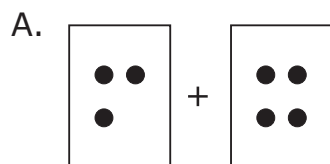
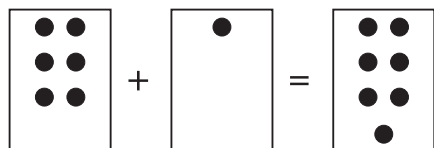


$6 + 1 = 7$

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Name _____

Date _____

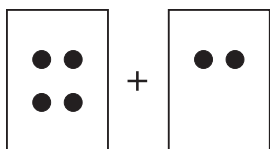
Quiz**1.** Which picture shows $3 + 4$?**2.** What addition fact and sum does the following picture show?

A. $5 + 1 = 6$

B. $6 - 1 = 7$

C. $6 + 1 = 7$

D. $1 + 6$

3. What addition fact does the following picture show?

A. $4 - 2$

B. $2 + 4$

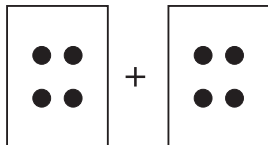
C. $6 - 4$

D. $4 + 2$

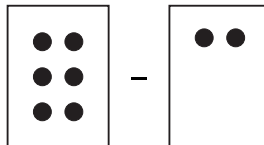
Appendix A: Fact Masters - Addition

4. Which picture shows $2 + 6$?

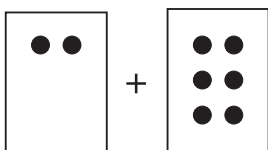
A.



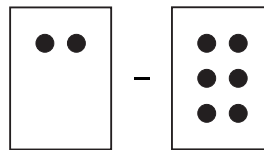
B.



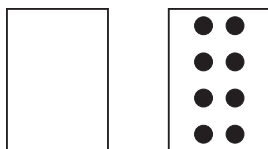
C.



D.



5. What addition fact does the following picture show?



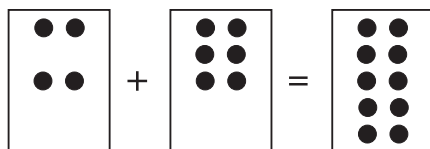
A. $6 + 0$

B. $8 - 0$

C. $0 + 8$

D. $0 - 8$

6. What addition fact and sum does the following picture show?



A. $6 + 5 = 11$

B. $4 + 6 = 10$

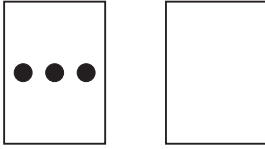
C. $10 - 4 = 6$

D. $10 - 6 = 4$

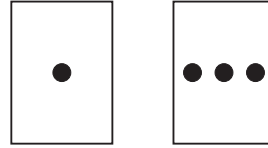
Appendix A: Fact Masters - Addition

7. Which picture shows $3 + 0$?

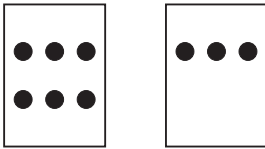
A.



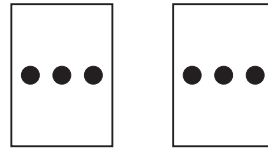
B.



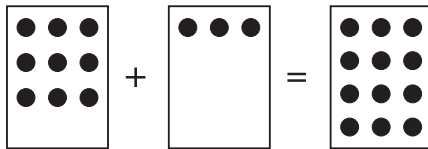
C.



D.



8. What addition fact and sum does the following picture show?



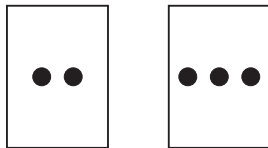
A. $6 + 3 = 9$

B. $9 - 3 = 12$

C. $9 + 3 = 12$

D. $12 - 3 = 9$

9. What addition fact does the following picture show?



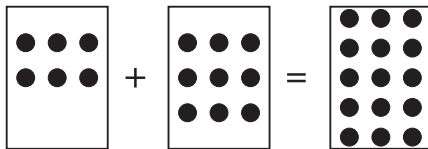
A. $5 - 2$

B. $2 + 3$

C. $5 - 3$

D. $3 + 5$

10. What addition fact and sum does the following picture show?



A. $9 + 9 = 18$

B. $15 - 9 = 6$

C. $6 + 9 = 15$

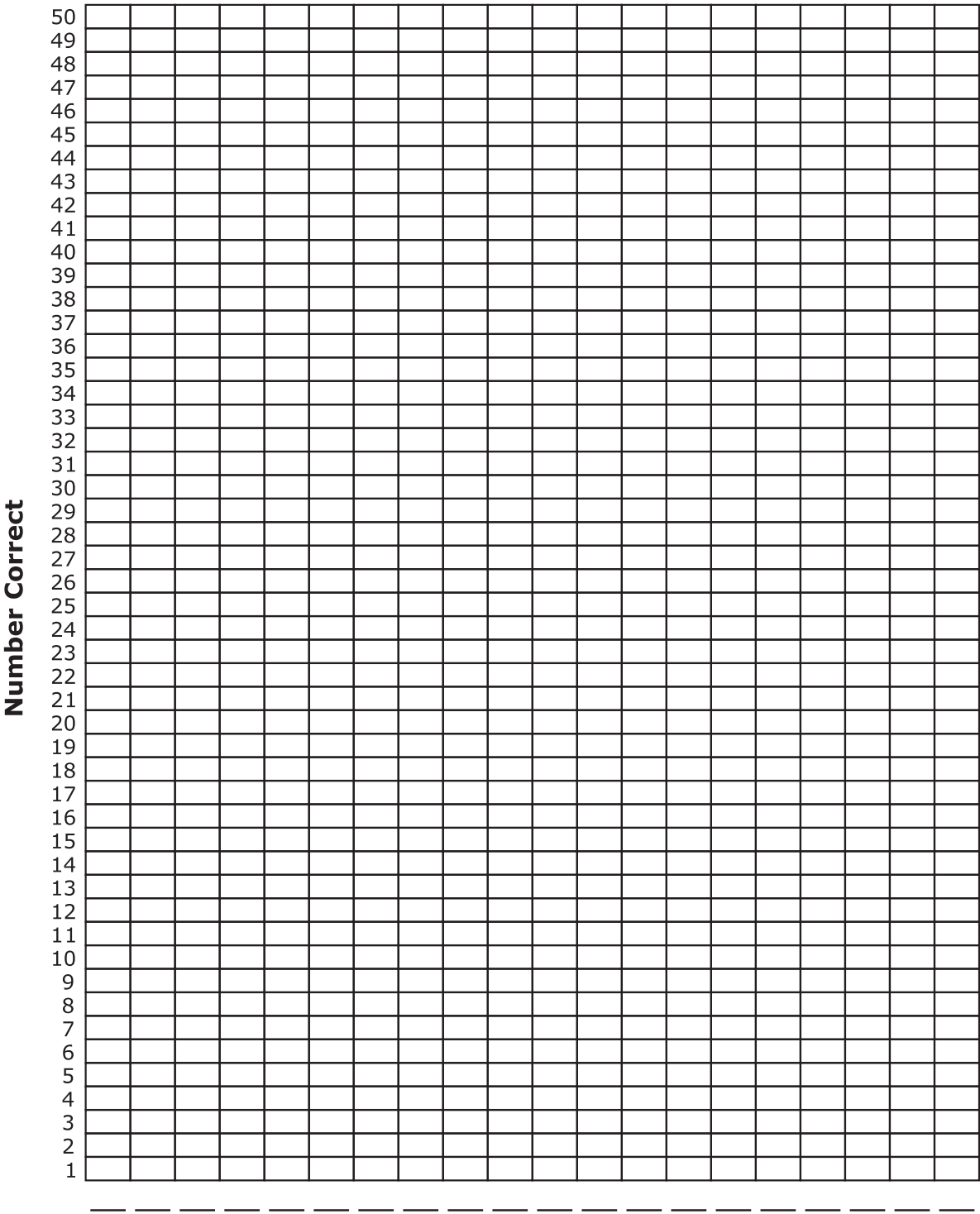
D. $6 + 6 = 12$

Appendix A: Fact Masters - Addition

TRANSPARENCY MASTER for S299

Directions: Follow your teacher’s directions to complete this graph.

Fact Masters Quiz



Appendix A: Fact Masters - Addition

TRANSPARENCY MASTER for S300

Directions: Follow your teacher’s directions to complete the grid below.

Grid for Basic Addition Facts

		Items									
Items	+	0	1	2	3	4	5	<u>6</u>	7	8	<u>9</u>
	0	0	1	2	3	4	5	<u>6</u>	7	8	<u>9</u>
	1	1	2	3	4	5	<u>6</u>	7	8	<u>9</u>	10
	2	2	3	4	5	<u>6</u>	7	8	<u>9</u>	10	11
	3	3	4	5	<u>6</u>	7	8	<u>9</u>	10	11	12
	4	4	5	<u>6</u>	7	8	<u>9</u>	10	11	12	13
	5	5	<u>6</u>	7	8	<u>9</u>	10	11	12	13	14
	<u>6</u>	<u>6</u>	7	8	<u>9</u>	10	11	12	13	14	15
	7	7	8	<u>9</u>	10	11	12	13	14	15	16
	8	8	<u>9</u>	10	11	12	13	14	15	16	17
	<u>9</u>	<u>9</u>	10	11	12	13	14	15	16	17	18

Appendix A: Fact Masters - Addition

0	1	2	3	4
5	<u>6</u>	7	8	<u>9</u>

0	1	2	3	4
5	<u>6</u>	7	8	<u>9</u>

0	1	2	3	4
5	<u>6</u>	7	8	<u>9</u>

Appendix A: Fact Masters - Addition

Addition Fact Quiz A

$1 + 0 = \underline{\quad}$

$5 + 8 = \underline{\quad}$

$3 + 7 = \underline{\quad}$

$9 + 1 = \underline{\quad}$

$7 + 3 = \underline{\quad}$

$3 + 2 = \underline{\quad}$

$2 + 0 = \underline{\quad}$

$9 + 9 = \underline{\quad}$

$7 + 8 = \underline{\quad}$

$4 + 4 = \underline{\quad}$

$1 + 2 = \underline{\quad}$

$6 + 8 = \underline{\quad}$

$5 + 4 = \underline{\quad}$

$0 + 4 = \underline{\quad}$

$3 + 1 = \underline{\quad}$

$8 + 7 = \underline{\quad}$

$2 + 5 = \underline{\quad}$

$7 + 7 = \underline{\quad}$

$1 + 3 = \underline{\quad}$

$3 + 5 = \underline{\quad}$

$3 + 4 = \underline{\quad}$

$1 + 7 = \underline{\quad}$

$6 + 6 = \underline{\quad}$

$0 + 2 = \underline{\quad}$

$1 + 5 = \underline{\quad}$

$3 + 3 = \underline{\quad}$

$5 + 3 = \underline{\quad}$

$9 + 2 = \underline{\quad}$

$2 + 6 = \underline{\quad}$

$0 + 1 = \underline{\quad}$

$0 + 9 = \underline{\quad}$

$8 + 6 = \underline{\quad}$

$4 + 6 = \underline{\quad}$

$6 + 4 = \underline{\quad}$

$3 + 6 = \underline{\quad}$

$8 + 8 = \underline{\quad}$

$8 + 3 = \underline{\quad}$

$5 + 0 = \underline{\quad}$

$5 + 2 = \underline{\quad}$

$4 + 3 = \underline{\quad}$

$4 + 7 = \underline{\quad}$

$9 + 8 = \underline{\quad}$

$1 + 8 = \underline{\quad}$

$8 + 9 = \underline{\quad}$

$4 + 5 = \underline{\quad}$

$5 + 9 = \underline{\quad}$

$0 + 7 = \underline{\quad}$

$0 + 5 = \underline{\quad}$

$6 + 1 = \underline{\quad}$

$8 + 5 = \underline{\quad}$

Appendix A: Fact Masters - Addition

Addition Fact Quiz B

$4 + 9 = \underline{\quad}$

$9 + 5 = \underline{\quad}$

$9 + 0 = \underline{\quad}$

$6 + 3 = \underline{\quad}$

$1 + 6 = \underline{\quad}$

$8 + 2 = \underline{\quad}$

$3 + 0 = \underline{\quad}$

$10 + 8 = \underline{\quad}$

$7 + 0 = \underline{\quad}$

$7 + 5 = \underline{\quad}$

$1 + 1 = \underline{\quad}$

$4 + 0 = \underline{\quad}$

$1 + 4 = \underline{\quad}$

$6 + 5 = \underline{\quad}$

$8 + 0 = \underline{\quad}$

$9 + 6 = \underline{\quad}$

$8 + 4 = \underline{\quad}$

$7 + 2 = \underline{\quad}$

$4 + 1 = \underline{\quad}$

$5 + 6 = \underline{\quad}$

$2 + 3 = \underline{\quad}$

$7 + 9 = \underline{\quad}$

$0 + 3 = \underline{\quad}$

$4 + 8 = \underline{\quad}$

$2 + 1 = \underline{\quad}$

$6 + 9 = \underline{\quad}$

$2 + 9 = \underline{\quad}$

$5 + 7 = \underline{\quad}$

$9 + 7 = \underline{\quad}$

$6 + 2 = \underline{\quad}$

$1 + 9 = \underline{\quad}$

$9 + 3 = \underline{\quad}$

$2 + 7 = \underline{\quad}$

$7 + 1 = \underline{\quad}$

$2 + 2 = \underline{\quad}$

$8 + 1 = \underline{\quad}$

$0 + 0 = \underline{\quad}$

$3 + 9 = \underline{\quad}$

$5 + 5 = \underline{\quad}$

$5 + 1 = \underline{\quad}$

$3 + 8 = \underline{\quad}$

$0 + 6 = \underline{\quad}$

$2 + 4 = \underline{\quad}$

$6 + 7 = \underline{\quad}$

$4 + 2 = \underline{\quad}$

$6 + 0 = \underline{\quad}$

$2 + 8 = \underline{\quad}$

$7 + 4 = \underline{\quad}$

$9 + 4 = \underline{\quad}$

$7 + 6 = \underline{\quad}$

Appendix A: Fact Masters - Addition

Here is the key to **T902**.**TRANSPARENCY MASTER****Addition Fact Quiz A**

$1 + 0 = \mathbf{1}$

$5 + 8 = \mathbf{13}$

$3 + 7 = \mathbf{10}$

$9 + 1 = \mathbf{10}$

$7 + 3 = \mathbf{10}$

$3 + 2 = \mathbf{5}$

$2 + 0 = \mathbf{2}$

$9 + 9 = \mathbf{18}$

$7 + 8 = \mathbf{15}$

$4 + 4 = \mathbf{8}$

$1 + 2 = \mathbf{3}$

$6 + 8 = \mathbf{14}$

$5 + 4 = \mathbf{9}$

$0 + 4 = \mathbf{4}$

$3 + 1 = \mathbf{4}$

$8 + 7 = \mathbf{15}$

$2 + 5 = \mathbf{7}$

$7 + 7 = \mathbf{14}$

$1 + 3 = \mathbf{4}$

$3 + 5 = \mathbf{8}$

$3 + 4 = \mathbf{7}$

$1 + 7 = \mathbf{8}$

$6 + 6 = \mathbf{12}$

$0 + 2 = \mathbf{2}$

$1 + 5 = \mathbf{6}$

$3 + 3 = \mathbf{6}$

$5 + 3 = \mathbf{8}$

$9 + 2 = \mathbf{11}$

$2 + 6 = \mathbf{8}$

$0 + 1 = \mathbf{1}$

$0 + 9 = \mathbf{9}$

$8 + 6 = \mathbf{14}$

$4 + 6 = \mathbf{10}$

$6 + 4 = \mathbf{10}$

$3 + 6 = \mathbf{9}$

$8 + 8 = \mathbf{16}$

$8 + 3 = \mathbf{11}$

$5 + 0 = \mathbf{5}$

$5 + 2 = \mathbf{7}$

$4 + 3 = \mathbf{7}$

$4 + 7 = \mathbf{11}$

$9 + 8 = \mathbf{17}$

$1 + 8 = \mathbf{9}$

$8 + 9 = \mathbf{17}$

$4 + 5 = \mathbf{9}$

$5 + 9 = \mathbf{14}$

$0 + 7 = \mathbf{7}$

$0 + 5 = \mathbf{5}$

$6 + 1 = \mathbf{7}$

$8 + 5 = \mathbf{13}$

Appendix A: Fact Masters - Addition

Here is the key to **T903**.**TRANSPARENCY MASTER****Addition Fact Quiz B**

$4 + 9 = \mathbf{13}$

$9 + 5 = \mathbf{14}$

$9 + 0 = \mathbf{9}$

$6 + 3 = \mathbf{9}$

$1 + 6 = \mathbf{7}$

$8 + 2 = \mathbf{10}$

$3 + 0 = \mathbf{3}$

$10 + 8 = \mathbf{18}$

$7 + 0 = \mathbf{7}$

$7 + 5 = \mathbf{12}$

$1 + 1 = \mathbf{2}$

$4 + 0 = \mathbf{4}$

$1 + 4 = \mathbf{5}$

$6 + 5 = \mathbf{11}$

$8 + 0 = \mathbf{8}$

$9 + 6 = \mathbf{15}$

$8 + 4 = \mathbf{12}$

$7 + 2 = \mathbf{9}$

$4 + 1 = \mathbf{5}$

$5 + 6 = \mathbf{11}$

$2 + 3 = \mathbf{5}$

$7 + 9 = \mathbf{16}$

$0 + 3 = \mathbf{3}$

$4 + 8 = \mathbf{12}$

$2 + 1 = \mathbf{3}$

$6 + 9 = \mathbf{15}$

$2 + 9 = \mathbf{11}$

$5 + 7 = \mathbf{12}$

$9 + 7 = \mathbf{16}$

$6 + 2 = \mathbf{8}$

$1 + 9 = \mathbf{10}$

$9 + 3 = \mathbf{12}$

$2 + 7 = \mathbf{9}$

$7 + 1 = \mathbf{8}$

$2 + 2 = \mathbf{4}$

$8 + 1 = \mathbf{9}$

$0 + 0 = \mathbf{0}$

$3 + 9 = \mathbf{12}$

$5 + 5 = \mathbf{10}$

$5 + 1 = \mathbf{6}$

$3 + 8 = \mathbf{11}$

$0 + 6 = \mathbf{6}$

$2 + 4 = \mathbf{6}$

$6 + 7 = \mathbf{13}$

$4 + 2 = \mathbf{6}$

$6 + 0 = \mathbf{6}$

$2 + 8 = \mathbf{10}$

$7 + 4 = \mathbf{11}$

$9 + 4 = \mathbf{13}$

$7 + 6 = \mathbf{13}$

Appendix A: Fact Masters - Addition

Addition: Day 1

- | | | |
|----------------------------|----------------------------|----------------------------|
| 1. $3 + 2 =$ _____ | 16. $4 + 1 =$ _____ | 31. $1 + 2 =$ _____ |
| 2. $2 + 0 =$ _____ | 17. $2 + 2 =$ _____ | 32. $4 + 2 =$ _____ |
| 3. $8 + 9 =$ _____ | 18. $9 + 8 =$ _____ | 33. $8 + 9 =$ _____ |
| 4. $1 + 3 =$ _____ | 19. $1 + 0 =$ _____ | 34. $1 + 4 =$ _____ |
| 5. $0 + 5 =$ _____ | 20. $3 + 1 =$ _____ | 35. $3 + 0 =$ _____ |
| 6. $9 + 8 =$ _____ | 21. $8 + 9 =$ _____ | 36. $9 + 8 =$ _____ |
| 7. $2 + 3 =$ _____ | 22. $3 + 3 =$ _____ | 37. $6 + 0 =$ _____ |
| 8. $5 + 1 =$ _____ | 23. $4 + 0 =$ _____ | 38. $1 + 5 =$ _____ |
| 9. $8 + 9 =$ _____ | 24. $9 + 8 =$ _____ | 39. $8 + 9 =$ _____ |
| 10. $7 + 0 =$ _____ | 25. $0 + 2 =$ _____ | 40. $0 + 1 =$ _____ |
| 11. $1 + 1 =$ _____ | 26. $0 + 4 =$ _____ | 41. $5 + 0 =$ _____ |
| 12. $9 + 8 =$ _____ | 27. $8 + 9 =$ _____ | 42. $9 + 8 =$ _____ |
| 13. $0 + 0 =$ _____ | 28. $2 + 1 =$ _____ | 43. $0 + 6 =$ _____ |
| 14. $0 + 3 =$ _____ | 29. $2 + 4 =$ _____ | 44. $6 + 1 =$ _____ |
| 15. $8 + 9 =$ _____ | 30. $9 + 8 =$ _____ | 45. $8 + 9 =$ _____ |
-

Addition: Day 2

- | | | |
|----------------------------|----------------------------|----------------------------|
| 1. $3 + 2 =$ _____ | 16. $9 + 8 =$ _____ | 31. $8 + 9 =$ _____ |
| 2. $2 + 0 =$ _____ | 17. $1 + 1 =$ _____ | 32. $3 + 3 =$ _____ |
| 3. $7 + 6 =$ _____ | 18. $6 + 7 =$ _____ | 33. $7 + 6 =$ _____ |
| 4. $8 + 9 =$ _____ | 19. $0 + 0 =$ _____ | 34. $4 + 0 =$ _____ |
| 5. $1 + 3 =$ _____ | 20. $0 + 3 =$ _____ | 35. $9 + 8 =$ _____ |
| 6. $6 + 7 =$ _____ | 21. $7 + 6 =$ _____ | 36. $6 + 7 =$ _____ |
| 7. $0 + 5 =$ _____ | 22. $8 + 9 =$ _____ | 37. $0 + 2 =$ _____ |
| 8. $9 + 8 =$ _____ | 23. $4 + 1 =$ _____ | 38. $0 + 4 =$ _____ |
| 9. $7 + 6 =$ _____ | 24. $6 + 7 =$ _____ | 39. $7 + 6 =$ _____ |
| 10. $2 + 3 =$ _____ | 25. $2 + 2 =$ _____ | 40. $8 + 9 =$ _____ |
| 11. $8 + 9 =$ _____ | 26. $9 + 8 =$ _____ | 41. $2 + 1 =$ _____ |
| 12. $6 + 7 =$ _____ | 27. $7 + 6 =$ _____ | 42. $6 + 7 =$ _____ |
| 13. $5 + 1 =$ _____ | 28. $1 + 0 =$ _____ | 43. $2 + 4 =$ _____ |
| 14. $7 + 0 =$ _____ | 29. $3 + 1 =$ _____ | 44. $9 + 8 =$ _____ |
| 15. $7 + 6 =$ _____ | 30. $6 + 7 =$ _____ | 45. $7 + 6 =$ _____ |

Appendix A: Fact Masters - Addition

Addition: Day 3

- | | | |
|----------------------------|----------------------------|----------------------------|
| 1. $1 + 2 =$ _____ | 16. $6 + 7 =$ _____ | 31. $7 + 6 =$ _____ |
| 2. $4 + 2 =$ _____ | 17. $0 + 1 =$ _____ | 32. $2 + 0 =$ _____ |
| 3. $6 + 8 =$ _____ | 18. $8 + 6 =$ _____ | 33. $6 + 8 =$ _____ |
| 4. $7 + 6 =$ _____ | 19. $9 + 8 =$ _____ | 34. $1 + 3 =$ _____ |
| 5. $1 + 4 =$ _____ | 20. $5 + 0 =$ _____ | 35. $6 + 7 =$ _____ |
| 6. $8 + 6 =$ _____ | 21. $6 + 8 =$ _____ | 36. $8 + 6 =$ _____ |
| 7. $8 + 9 =$ _____ | 22. $7 + 6 =$ _____ | 37. $9 + 8 =$ _____ |
| 8. $6 + 7 =$ _____ | 23. $0 + 6 =$ _____ | 38. $0 + 5 =$ _____ |
| 9. $6 + 8 =$ _____ | 24. $8 + 6 =$ _____ | 39. $6 + 8 =$ _____ |
| 10. $3 + 0 =$ _____ | 25. $6 + 1 =$ _____ | 40. $7 + 6 =$ _____ |
| 11. $7 + 6 =$ _____ | 26. $6 + 7 =$ _____ | 41. $2 + 3 =$ _____ |
| 12. $8 + 6 =$ _____ | 27. $6 + 8 =$ _____ | 42. $8 + 6 =$ _____ |
| 13. $6 + 0 =$ _____ | 28. $3 + 2 =$ _____ | 43. $8 + 9 =$ _____ |
| 14. $1 + 5 =$ _____ | 29. $8 + 9 =$ _____ | 44. $6 + 7 =$ _____ |
| 15. $6 + 8 =$ _____ | 30. $8 + 6 =$ _____ | 45. $6 + 8 =$ _____ |
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Addition: Day 4

- | | | |
|----------------------------|----------------------------|----------------------------|
| 1. $8 + 9 =$ _____ | 16. $8 + 6 =$ _____ | 31. $6 + 8 =$ _____ |
| 2. $5 + 1 =$ _____ | 17. $0 + 3 =$ _____ | 32. $3 + 1 =$ _____ |
| 3. $8 + 7 =$ _____ | 18. $7 + 8 =$ _____ | 33. $8 + 7 =$ _____ |
| 4. $6 + 8 =$ _____ | 19. $6 + 7 =$ _____ | 34. $3 + 3 =$ _____ |
| 5. $7 + 0 =$ _____ | 20. $4 + 1 =$ _____ | 35. $8 + 6 =$ _____ |
| 6. $7 + 8 =$ _____ | 21. $8 + 7 =$ _____ | 36. $7 + 8 =$ _____ |
| 7. $7 + 6 =$ _____ | 22. $6 + 8 =$ _____ | 37. $6 + 7 =$ _____ |
| 8. $8 + 6 =$ _____ | 23. $2 + 2 =$ _____ | 38. $4 + 0 =$ _____ |
| 9. $8 + 7 =$ _____ | 24. $7 + 8 =$ _____ | 39. $8 + 7 =$ _____ |
| 10. $1 + 1 =$ _____ | 25. $8 + 9 =$ _____ | 40. $6 + 8 =$ _____ |
| 11. $6 + 8 =$ _____ | 26. $8 + 6 =$ _____ | 41. $9 + 8 =$ _____ |
| 12. $7 + 8 =$ _____ | 27. $8 + 7 =$ _____ | 42. $7 + 8 =$ _____ |
| 13. $9 + 8 =$ _____ | 28. $1 + 0 =$ _____ | 43. $7 + 6 =$ _____ |
| 14. $0 + 0 =$ _____ | 29. $7 + 6 =$ _____ | 44. $8 + 6 =$ _____ |
| 15. $8 + 7 =$ _____ | 30. $7 + 8 =$ _____ | 45. $8 + 7 =$ _____ |

Appendix A: Fact Masters - Addition

Addition: Day 5

- | | | |
|----------------------------|----------------------------|----------------------------|
| 1. $7 + 6 =$ _____ | 16. $7 + 9 =$ _____ | 31. $9 + 7 =$ _____ |
| 2. $6 + 0 =$ _____ | 17. $0 + 1 =$ _____ | 32. $6 + 1 =$ _____ |
| 3. $5 + 9 =$ _____ | 18. $9 + 5 =$ _____ | 33. $5 + 9 =$ _____ |
| 4. $9 + 7 =$ _____ | 19. $7 + 8 =$ _____ | 34. $9 + 8 =$ _____ |
| 5. $7 + 6 =$ _____ | 20. $6 + 7 =$ _____ | 35. $7 + 8 =$ _____ |
| 6. $7 + 9 =$ _____ | 21. $9 + 7 =$ _____ | 36. $7 + 9 =$ _____ |
| 7. $6 + 8 =$ _____ | 22. $8 + 7 =$ _____ | 37. $8 + 6 =$ _____ |
| 8. $7 + 8 =$ _____ | 23. $1 + 2 =$ _____ | 38. $8 + 9 =$ _____ |
| 9. $9 + 7 =$ _____ | 24. $7 + 9 =$ _____ | 39. $9 + 7 =$ _____ |
| 10. $0 + 4 =$ _____ | 25. $6 + 7 =$ _____ | 40. $8 + 7 =$ _____ |
| 11. $8 + 7 =$ _____ | 26. $7 + 8 =$ _____ | 41. $7 + 6 =$ _____ |
| 12. $7 + 9 =$ _____ | 27. $9 + 7 =$ _____ | 42. $7 + 9 =$ _____ |
| 13. $6 + 7 =$ _____ | 28. $4 + 2 =$ _____ | 43. $6 + 8 =$ _____ |
| 14. $2 + 1 =$ _____ | 29. $6 + 8 =$ _____ | 44. $7 + 8 =$ _____ |
| 15. $9 + 7 =$ _____ | 30. $7 + 9 =$ _____ | 45. $9 + 7 =$ _____ |
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Addition: Day 6

- | | | |
|----------------------------|----------------------------|----------------------------|
| 1. $6 + 8 =$ _____ | 16. $7 + 9 =$ _____ | 31. $9 + 7 =$ _____ |
| 2. $6 + 0 =$ _____ | 17. $0 + 1 =$ _____ | 32. $6 + 1 =$ _____ |
| 3. $5 + 9 =$ _____ | 18. $9 + 5 =$ _____ | 33. $5 + 9 =$ _____ |
| 4. $9 + 7 =$ _____ | 19. $7 + 8 =$ _____ | 34. $9 + 8 =$ _____ |
| 5. $7 + 6 =$ _____ | 20. $6 + 7 =$ _____ | 35. $7 + 9 =$ _____ |
| 6. $9 + 5 =$ _____ | 21. $5 + 9 =$ _____ | 36. $9 + 5 =$ _____ |
| 7. $8 + 7 =$ _____ | 22. $9 + 7 =$ _____ | 37. $7 + 8 =$ _____ |
| 8. $7 + 9 =$ _____ | 23. $5 + 0 =$ _____ | 38. $7 + 6 =$ _____ |
| 9. $5 + 9 =$ _____ | 24. $9 + 5 =$ _____ | 39. $5 + 9 =$ _____ |
| 10. $8 + 9 =$ _____ | 25. $6 + 8 =$ _____ | 40. $9 + 7 =$ _____ |
| 11. $9 + 7 =$ _____ | 26. $7 + 9 =$ _____ | 41. $8 + 6 =$ _____ |
| 12. $9 + 5 =$ _____ | 27. $5 + 9 =$ _____ | 42. $9 + 5 =$ _____ |
| 13. $8 + 6 =$ _____ | 28. $0 + 6 =$ _____ | 43. $8 + 7 =$ _____ |
| 14. $1 + 5 =$ _____ | 29. $8 + 7 =$ _____ | 44. $7 + 9 =$ _____ |
| 15. $5 + 9 =$ _____ | 30. $9 + 5 =$ _____ | 45. $5 + 9 =$ _____ |

Appendix A: Fact Masters - Addition

Addition: Day 7

- | | | |
|----------------------------|----------------------------|----------------------------|
| 1. $8 + 7 =$ _____ | 16. $9 + 5 =$ _____ | 31. $5 + 9 =$ _____ |
| 2. $8 + 9 =$ _____ | 17. $2 + 0 =$ _____ | 32. $9 + 8 =$ _____ |
| 3. $6 + 9 =$ _____ | 18. $9 + 6 =$ _____ | 33. $6 + 9 =$ _____ |
| 4. $5 + 9 =$ _____ | 19. $7 + 9 =$ _____ | 34. $6 + 7 =$ _____ |
| 5. $6 + 8 =$ _____ | 20. $8 + 6 =$ _____ | 35. $9 + 5 =$ _____ |
| 6. $9 + 6 =$ _____ | 21. $6 + 9 =$ _____ | 36. $9 + 6 =$ _____ |
| 7. $9 + 7 =$ _____ | 22. $5 + 9 =$ _____ | 37. $7 + 9 =$ _____ |
| 8. $9 + 5 =$ _____ | 23. $1 + 3 =$ _____ | 38. $6 + 8 =$ _____ |
| 9. $6 + 9 =$ _____ | 24. $9 + 6 =$ _____ | 39. $6 + 9 =$ _____ |
| 10. $7 + 6 =$ _____ | 25. $8 + 7 =$ _____ | 40. $5 + 9 =$ _____ |
| 11. $5 + 9 =$ _____ | 26. $9 + 5 =$ _____ | 41. $7 + 8 =$ _____ |
| 12. $9 + 6 =$ _____ | 27. $6 + 9 =$ _____ | 42. $9 + 6 =$ _____ |
| 13. $7 + 8 =$ _____ | 28. $0 + 5 =$ _____ | 43. $9 + 7 =$ _____ |
| 14. $3 + 2 =$ _____ | 29. $9 + 7 =$ _____ | 44. $9 + 5 =$ _____ |
| 15. $6 + 9 =$ _____ | 30. $9 + 6 =$ _____ | 45. $6 + 9 =$ _____ |
-

Addition: Day 8

- | | | |
|----------------------------|----------------------------|----------------------------|
| 1. $9 + 7 =$ _____ | 16. $9 + 6 =$ _____ | 31. $6 + 9 =$ _____ |
| 2. $7 + 6 =$ _____ | 17. $2 + 3 =$ _____ | 32. $6 + 7 =$ _____ |
| 3. $8 + 8 =$ _____ | 18. $7 + 7 =$ _____ | 33. $8 + 8 =$ _____ |
| 4. $6 + 9 =$ _____ | 19. $9 + 5 =$ _____ | 34. $8 + 6 =$ _____ |
| 5. $8 + 7 =$ _____ | 20. $7 + 8 =$ _____ | 35. $9 + 6 =$ _____ |
| 6. $7 + 7 =$ _____ | 21. $8 + 8 =$ _____ | 36. $7 + 7 =$ _____ |
| 7. $5 + 9 =$ _____ | 22. $6 + 9 =$ _____ | 37. $9 + 5 =$ _____ |
| 8. $9 + 6 =$ _____ | 23. $5 + 1 =$ _____ | 38. $8 + 7 =$ _____ |
| 9. $8 + 8 =$ _____ | 24. $7 + 7 =$ _____ | 39. $8 + 8 =$ _____ |
| 10. $6 + 8 =$ _____ | 25. $9 + 7 =$ _____ | 40. $6 + 9 =$ _____ |
| 11. $6 + 9 =$ _____ | 26. $9 + 6 =$ _____ | 41. $7 + 9 =$ _____ |
| 12. $7 + 7 =$ _____ | 27. $8 + 8 =$ _____ | 42. $7 + 7 =$ _____ |
| 13. $7 + 9 =$ _____ | 28. $9 + 8 =$ _____ | 43. $5 + 9 =$ _____ |
| 14. $8 + 9 =$ _____ | 29. $5 + 9 =$ _____ | 44. $9 + 6 =$ _____ |
| 15. $8 + 8 =$ _____ | 30. $7 + 7 =$ _____ | 45. $8 + 8 =$ _____ |

Appendix A: Fact Masters - Addition

Addition: Day 9

- | | | |
|---------------------|---------------------|---------------------|
| 1. $5 + 9 =$ _____ | 16. $7 + 7 =$ _____ | 31. $8 + 8 =$ _____ |
| 2. $6 + 8 =$ _____ | 17. $8 + 9 =$ _____ | 32. $8 + 6 =$ _____ |
| 3. $8 + 5 =$ _____ | 18. $5 + 8 =$ _____ | 33. $8 + 5 =$ _____ |
| 4. $8 + 8 =$ _____ | 19. $9 + 6 =$ _____ | 34. $7 + 8 =$ _____ |
| 5. $9 + 7 =$ _____ | 20. $7 + 9 =$ _____ | 35. $7 + 7 =$ _____ |
| 6. $5 + 8 =$ _____ | 21. $8 + 5 =$ _____ | 36. $5 + 8 =$ _____ |
| 7. $6 + 9 =$ _____ | 22. $8 + 8 =$ _____ | 37. $9 + 6 =$ _____ |
| 8. $7 + 7 =$ _____ | 23. $9 + 8 =$ _____ | 38. $9 + 7 =$ _____ |
| 9. $8 + 5 =$ _____ | 24. $5 + 8 =$ _____ | 39. $8 + 5 =$ _____ |
| 10. $8 + 7 =$ _____ | 25. $5 + 9 =$ _____ | 40. $8 + 8 =$ _____ |
| 11. $8 + 8 =$ _____ | 26. $7 + 7 =$ _____ | 41. $9 + 5 =$ _____ |
| 12. $5 + 8 =$ _____ | 27. $8 + 5 =$ _____ | 42. $5 + 8 =$ _____ |
| 13. $9 + 5 =$ _____ | 28. $6 + 7 =$ _____ | 43. $6 + 9 =$ _____ |
| 14. $7 + 6 =$ _____ | 29. $6 + 9 =$ _____ | 44. $7 + 7 =$ _____ |
| 15. $8 + 5 =$ _____ | 30. $5 + 8 =$ _____ | 45. $8 + 5 =$ _____ |
-

Addition: Day 10

- | | | |
|---------------------|---------------------|---------------------|
| 1. $6 + 9 =$ _____ | 16. $5 + 8 =$ _____ | 31. $8 + 5 =$ _____ |
| 2. $8 + 7 =$ _____ | 17. $7 + 6 =$ _____ | 32. $7 + 8 =$ _____ |
| 3. $4 + 8 =$ _____ | 18. $8 + 4 =$ _____ | 33. $4 + 8 =$ _____ |
| 4. $8 + 5 =$ _____ | 19. $7 + 7 =$ _____ | 34. $7 + 9 =$ _____ |
| 5. $5 + 9 =$ _____ | 20. $9 + 5 =$ _____ | 35. $5 + 8 =$ _____ |
| 6. $8 + 4 =$ _____ | 21. $4 + 8 =$ _____ | 36. $8 + 4 =$ _____ |
| 7. $8 + 8 =$ _____ | 22. $8 + 5 =$ _____ | 37. $7 + 7 =$ _____ |
| 8. $5 + 8 =$ _____ | 23. $8 + 9 =$ _____ | 38. $5 + 9 =$ _____ |
| 9. $4 + 8 =$ _____ | 24. $8 + 4 =$ _____ | 39. $4 + 8 =$ _____ |
| 10. $9 + 7 =$ _____ | 25. $6 + 9 =$ _____ | 40. $8 + 5 =$ _____ |
| 11. $8 + 5 =$ _____ | 26. $5 + 8 =$ _____ | 41. $9 + 6 =$ _____ |
| 12. $8 + 4 =$ _____ | 27. $4 + 8 =$ _____ | 42. $8 + 4 =$ _____ |
| 13. $9 + 6 =$ _____ | 28. $8 + 6 =$ _____ | 43. $8 + 8 =$ _____ |
| 14. $6 + 8 =$ _____ | 29. $8 + 8 =$ _____ | 44. $5 + 8 =$ _____ |
| 15. $4 + 8 =$ _____ | 30. $8 + 4 =$ _____ | 45. $4 + 8 =$ _____ |

Appendix A: Fact Masters - Addition

Addition: Day 11

- | | | |
|---------------------|---------------------|---------------------|
| 1. $8 + 8 =$ _____ | 16. $8 + 4 =$ _____ | 31. $4 + 8 =$ _____ |
| 2. $9 + 7 =$ _____ | 17. $8 + 9 =$ _____ | 32. $7 + 9 =$ _____ |
| 3. $4 + 6 =$ _____ | 18. $6 + 4 =$ _____ | 33. $4 + 6 =$ _____ |
| 4. $4 + 8 =$ _____ | 19. $5 + 8 =$ _____ | 34. $9 + 5 =$ _____ |
| 5. $6 + 9 =$ _____ | 20. $9 + 6 =$ _____ | 35. $8 + 4 =$ _____ |
| 6. $6 + 4 =$ _____ | 21. $4 + 6 =$ _____ | 36. $6 + 4 =$ _____ |
| 7. $8 + 5 =$ _____ | 22. $4 + 8 =$ _____ | 37. $5 + 8 =$ _____ |
| 8. $8 + 4 =$ _____ | 23. $7 + 6 =$ _____ | 38. $6 + 9 =$ _____ |
| 9. $4 + 6 =$ _____ | 24. $6 + 4 =$ _____ | 39. $4 + 6 =$ _____ |
| 10. $5 + 9 =$ _____ | 25. $8 + 8 =$ _____ | 40. $4 + 8 =$ _____ |
| 11. $4 + 8 =$ _____ | 26. $8 + 4 =$ _____ | 41. $7 + 7 =$ _____ |
| 12. $6 + 4 =$ _____ | 27. $4 + 6 =$ _____ | 42. $6 + 4 =$ _____ |
| 13. $7 + 7 =$ _____ | 28. $6 + 8 =$ _____ | 43. $8 + 5 =$ _____ |
| 14. $8 + 7 =$ _____ | 29. $8 + 5 =$ _____ | 44. $8 + 4 =$ _____ |
| 15. $4 + 6 =$ _____ | 30. $6 + 4 =$ _____ | 45. $4 + 6 =$ _____ |
-

Addition: Day 12

- | | | |
|---------------------|---------------------|---------------------|
| 1. $8 + 5 =$ _____ | 16. $6 + 4 =$ _____ | 31. $4 + 6 =$ _____ |
| 2. $5 + 9 =$ _____ | 17. $8 + 9 =$ _____ | 32. $9 + 7 =$ _____ |
| 3. $4 + 7 =$ _____ | 18. $7 + 4 =$ _____ | 33. $4 + 7 =$ _____ |
| 4. $4 + 6 =$ _____ | 19. $8 + 4 =$ _____ | 34. $6 + 9 =$ _____ |
| 5. $8 + 8 =$ _____ | 20. $7 + 7 =$ _____ | 35. $6 + 4 =$ _____ |
| 6. $7 + 4 =$ _____ | 21. $4 + 7 =$ _____ | 36. $7 + 4 =$ _____ |
| 7. $4 + 8 =$ _____ | 22. $4 + 6 =$ _____ | 37. $8 + 4 =$ _____ |
| 8. $6 + 4 =$ _____ | 23. $9 + 6 =$ _____ | 38. $8 + 8 =$ _____ |
| 9. $4 + 7 =$ _____ | 24. $7 + 4 =$ _____ | 39. $4 + 7 =$ _____ |
| 10. $6 + 9 =$ _____ | 25. $8 + 5 =$ _____ | 40. $4 + 6 =$ _____ |
| 11. $4 + 6 =$ _____ | 26. $6 + 4 =$ _____ | 41. $5 + 8 =$ _____ |
| 12. $7 + 4 =$ _____ | 27. $4 + 7 =$ _____ | 42. $7 + 4 =$ _____ |
| 13. $5 + 8 =$ _____ | 28. $6 + 8 =$ _____ | 43. $4 + 8 =$ _____ |
| 14. $8 + 7 =$ _____ | 29. $4 + 8 =$ _____ | 44. $6 + 4 =$ _____ |
| 15. $4 + 7 =$ _____ | 30. $7 + 4 =$ _____ | 45. $4 + 7 =$ _____ |

Appendix A: Fact Masters - Addition

Addition: Day 13

- | | | |
|--------------------------|--------------------------|--------------------------|
| 1. 4 + 8 = _____ | 16. 7 + 4 = _____ | 31. 4 + 7 = _____ |
| 2. 5 + 9 = _____ | 17. 8 + 9 = _____ | 32. 9 + 7 = _____ |
| 3. 9 + 4 = _____ | 18. 7 + 5 = _____ | 33. 9 + 4 = _____ |
| 4. 4 + 7 = _____ | 19. 6 + 4 = _____ | 34. 6 + 9 = _____ |
| 5. 8 + 5 = _____ | 20. 5 + 8 = _____ | 35. 7 + 4 = _____ |
| 6. 7 + 5 = _____ | 21. 9 + 4 = _____ | 36. 7 + 5 = _____ |
| 7. 4 + 6 = _____ | 22. 4 + 7 = _____ | 37. 6 + 4 = _____ |
| 8. 7 + 4 = _____ | 23. 7 + 6 = _____ | 38. 8 + 5 = _____ |
| 9. 9 + 4 = _____ | 24. 7 + 5 = _____ | 39. 9 + 4 = _____ |
| 10. 8 + 8 = _____ | 25. 4 + 8 = _____ | 40. 4 + 7 = _____ |
| 11. 4 + 7 = _____ | 26. 7 + 4 = _____ | 41. 8 + 4 = _____ |
| 12. 7 + 5 = _____ | 27. 9 + 4 = _____ | 42. 7 + 5 = _____ |
| 13. 8 + 4 = _____ | 28. 6 + 8 = _____ | 43. 4 + 6 = _____ |
| 14. 8 + 7 = _____ | 29. 4 + 6 = _____ | 44. 7 + 4 = _____ |
| 15. 9 + 4 = _____ | 30. 7 + 5 = _____ | 45. 9 + 4 = _____ |

Appendix A: Fact Masters - Addition

