LETTER HOME

Multidigit Addition and Subtraction

Dear Family Member:

Multidigit Addition and Subtraction. In this unit, students focus on developing strategies to add and subtract multidigit numbers. Students expand their mental math strategies and develop paper-and-pencil methods. After exploring a variety of invented strategies and paper-and-pencil methods, students develop a strategies menu for multidigit subtraction and utilize the Addition Strategies Menu developed in Unit 7. See Figures 1 and 2. The menus serve as a reminder, helps student make connections among strategies, and encourages students to choose appropriate strategies.

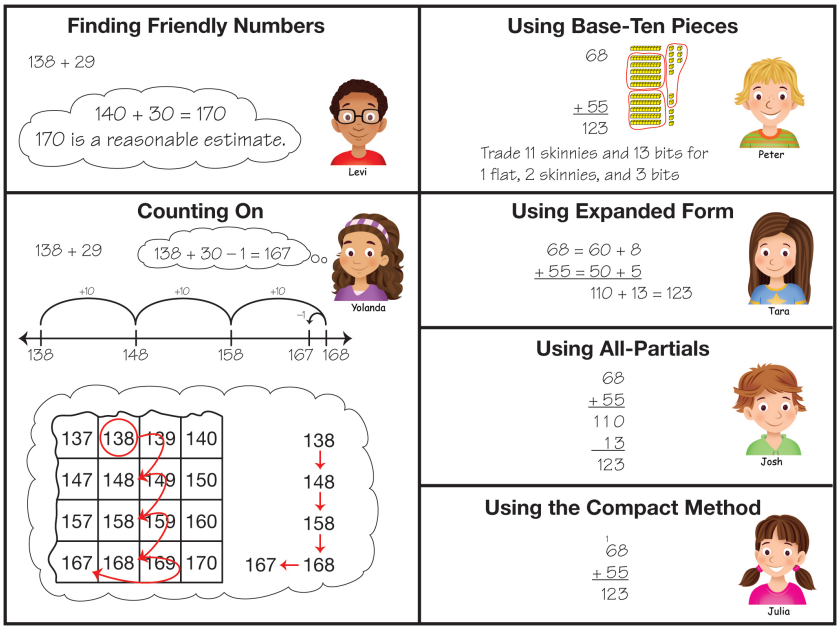

Figure 1: Addition Strategies Menu

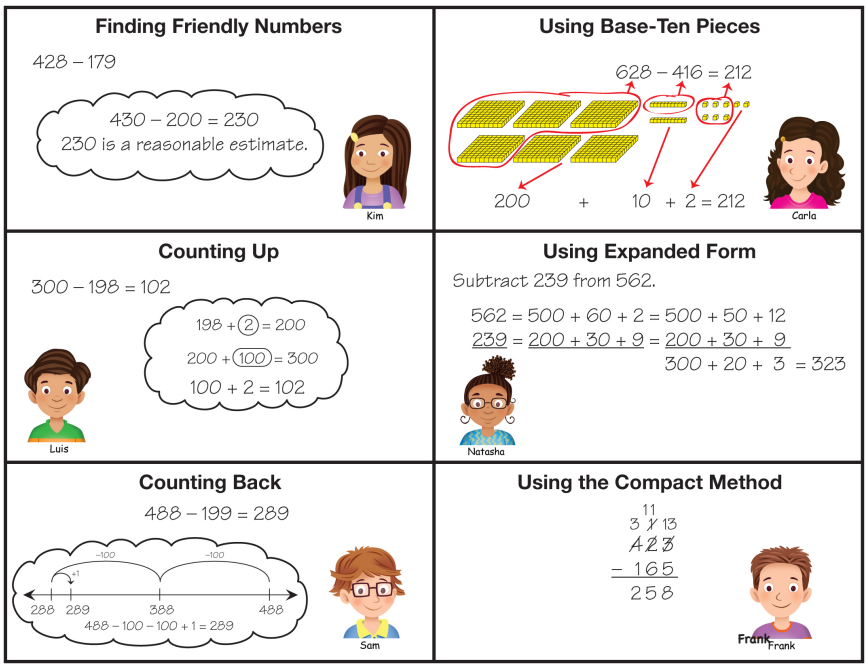

Figure 2: Subtraction Strategies Menu for Larger Numbers

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You can help reinforce the development of these strategies at home with the following activities:

- **Play Take Your Places Please: 4 Digits.** In this game, players take turns making multidigit numbers and compare them. Directions for this game are in the *Student Activity Book.*
- **Use Addition and Subtraction Strategies Menus.** Encourage your child to use an appropriate method that makes sense to him or her and matches the problem to be solved.
- **Play the Digits Game.** A player chooses a playing board that is a template for an addition or subtraction problem. Cards are drawn one at a time from a deck of 0–9 Digit Cards. After each draw, players write a digit in a box on the playing board trying to find the largest or smallest difference correctly.

Math Facts and Mental Math

Students' fluency with the subtraction facts related to the addition facts in Group F will be assessed in this unit.

Group F: 14 − 4, 14 − 6, 14 − 8, 14 − 10, 15 − 5, 15 − 6, 15 − 9, 15 − 10, 16 − 6, 16 − 7, 16 − 9, 16 − 10, 17 − 7, 17 − 8, 17 − 9, 17 − 10, 18 − 8, 18 − 9, 18 − 10

You can help your child review these facts using the flash cards the teacher sent home or by making a set of flash cards from index cards or scrap paper. Study the facts in small groups each night. As your child goes through the flash cards, put the cards in three stacks: Facts I Know Quickly, Facts I Can Figure Out, and Facts I Need to Learn.

For Facts I Need to Learn, work on strategies for figuring them out.

For Facts I Can Figure Out, use the flash cards to practice the facts for fluency.

For Facts I Know Quickly, help your child use strategies to solve problems like these using mental math: 180 − 100 (practices 18 − 10), 1400 − 400 (practices 14 − 4).

Sincerely,

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Unit 14: Home Practice

Part 1 Subtraction Flash Cards: Group F

Take home your *Triangle Flash Cards: Group F*. Ask a family member to choose one flash card at a time for you to solve. Sort the flash cards into three piles: Facts I Know Quickly, Facts I Can Figure Out, and Facts I Need to Learn. Update your *Subtraction Facts I Know* chart. Clip the cards in the Facts I Know Quickly pile together and place them back into the envelope. Practice the facts in the last two piles again.

Part 2 Subtraction Practice with Tens and Hundreds

A. $15 - 5 = \square$

B. $150 - 50 = \square$

C. $1500 - 500 = \square$

D. $\square = 15 - 6$

E. $\square = 150 - 60$

F. $\square = 1500 - 600$

G. $\square = 16 - 9$

H. $\square = 160 - 90$

I. $\square = 1600 - 900$

J. Show or tell how you would use addition to solve Question G.

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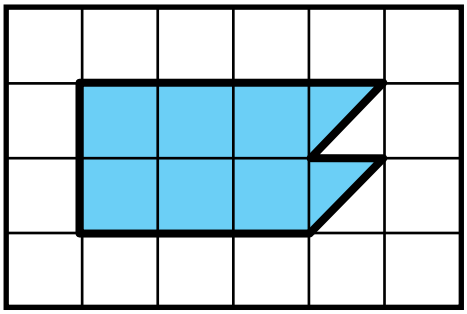
Part 3 Area of Shapes

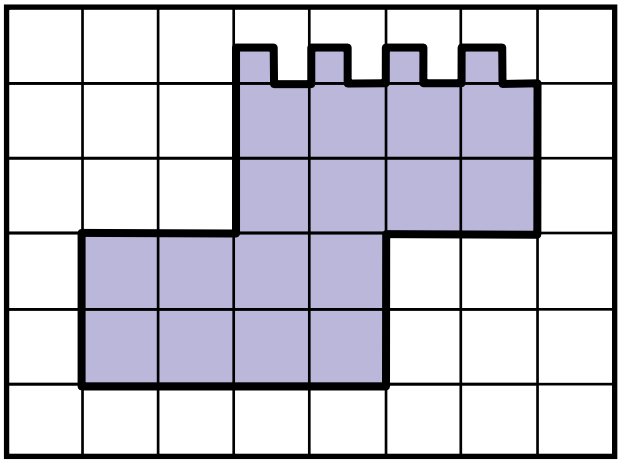
Find the area of each shape in square centimeters.

1.



Area _____

2.



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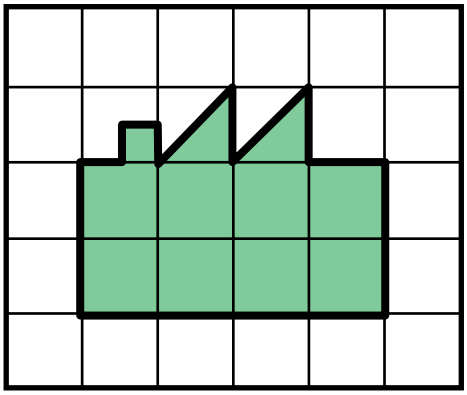

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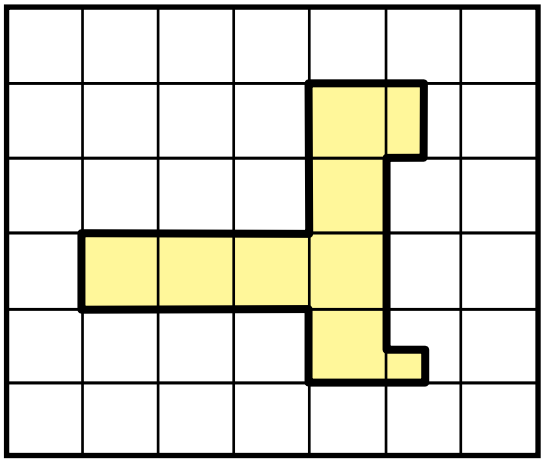

Area _____

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Part 4 Fair Shares

1. Draw 5 dog bowls. Share 15 bones.

How many will each dog get? _____

Number sentence _____

2. Draw 3 party bags. Share 19 gumballs.

How many gumballs will be in each bag? _____

Number sentence _____

3. The pet shop owner has 17 bags of kitty treats. She needs 2 bags of kitty treats every day. How many days will the kitty treats last?

Number sentence _____

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Part 5 Add and Subtract

A. $15 - 9 = \square$

B. $18 - \square = 9$

C. $14 - 6 = \square$

D. $17 - \square = 10$

E. $14 - \square = 6$

F. $15 - \square = 9$

G. $9 + \square = 16$

H. $8 + \square = 17$

I. $7 + \square = 17$

J. $9 + 9 = \square$

K. Explain your strategy for solving Question E.

L. One week Jenelle babysat for 9 hours. The next week she babysat for 17 hours.

1. How many more hours did she babysit in the second week?

2. How many hours did she babysit in the two weeks together?

3. Jenelle's aunt pays her $2.00 for each hour. How much did she pay Jenelle in the two weeks? Show how you know.

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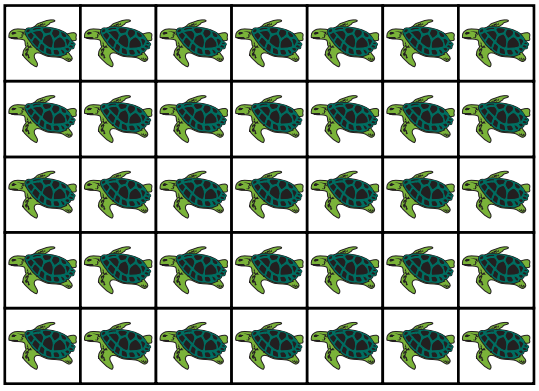
Part 6 Zoo Stickers

1. The zoo gift shop sells sheets of animal stickers. How many stickers are on each sheet? Write a number sentence.



Number sentence _____

2. Emily bought two sheets of stickers. How many stickers did she buy?

3. Emily gives her two little brothers one sheet of stickers to share. If they share them equally, how many stickers does each boy get? Explain your thinking.

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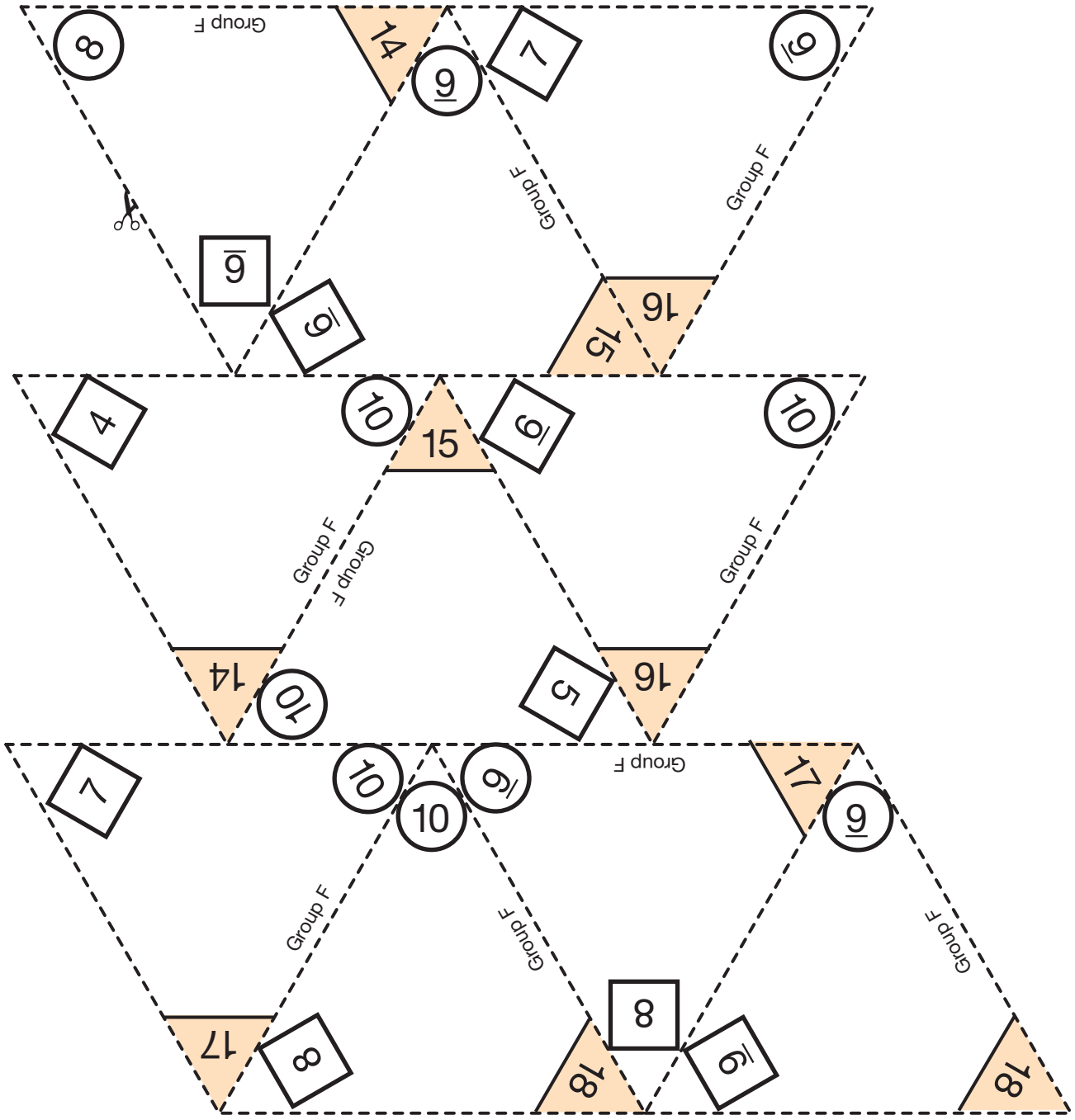
Triangle Flash Cards: Group F

- To practice an addition fact, cover the corner with the highest number. Add the two uncovered numbers.
- To practice a subtraction fact, cover one of the smaller numbers and subtract from the highest number.



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Subtraction Facts I Know

Circle the subtraction facts you know and can answer quickly.

0 − 0 = 0	1 − 0 = 1	2 − 0 = 2	3 − 0 = 3	4 − 0 = 4	5 − 0 = 5	6 − 0 = 6	7 − 0 = 7	8 − 0 = 8	9 − 0 = 9
1 − 1 = 0	2 − 1 = 1	3 − 1 = 2	4 − 1 = 3	5 − 1 = 4	6 − 1 = 5	7 − 1 = 6	8 − 1 = 7	9 − 1 = 8	10 − 1 = 9
2 − 2 = 0	3 − 2 = 1	4 − 2 = 2	5 − 2 = 3	6 − 2 = 4	7 − 2 = 5	8 − 2 = 6	9 − 2 = 7	10 − 2 = 8	11 − 2 = 9
3 − 3 = 0	4 − 3 = 1	5 − 3 = 2	6 − 3 = 3	7 − 3 = 4	8 − 3 = 5	9 − 3 = 6	10 − 3 = 7	11 − 3 = 8	12 − 3 = 9
4 − 4 = 0	5 − 4 = 1	6 − 4 = 2	7 − 4 = 3	8 − 4 = 4	9 − 4 = 5	10 − 4 = 6	11 − 4 = 7	12 − 4 = 8	13 − 4 = 9
5 − 5 = 0	6 − 5 = 1	7 − 5 = 2	8 − 5 = 3	9 − 5 = 4	10 − 5 = 5	11 − 5 = 6	12 − 5 = 7	13 − 5 = 8	14 − 5 = 9
6 − 6 = 0	7 − 6 = 1	8 − 6 = 2	9 − 6 = 3	10 − 6 = 4	11 − 6 = 5	12 − 6 = 6	13 − 6 = 7	14 − 6 = 8	15 − 6 = 9
7 − 7 = 0	8 − 7 = 1	9 − 7 = 2	10 − 7 = 3	11 − 7 = 4	12 − 7 = 5	13 − 7 = 6	14 − 7 = 7	15 − 7 = 8	16 − 7 = 9
8 − 8 = 0	9 − 8 = 1	10 − 8 = 2	11 − 8 = 3	12 − 8 = 4	13 − 8 = 5	14 − 8 = 6	15 − 8 = 7	16 − 8 = 8	17 − 8 = 9
9 − 9 = 0	10 − 9 = 1	11 − 9 = 2	12 − 9 = 3	13 − 9 = 4	14 − 9 = 5	15 − 9 = 6	16 − 9 = 7	17 − 9 = 8	18 − 9 = 9
10 − 10 = 0	11 − 10 = 1	12 − 10 = 2	13 − 10 = 3	14 − 10 = 4	15 − 10 = 5	16 − 10 = 6	17 − 10 = 7	18 − 10 = 8	19 − 10 = 9

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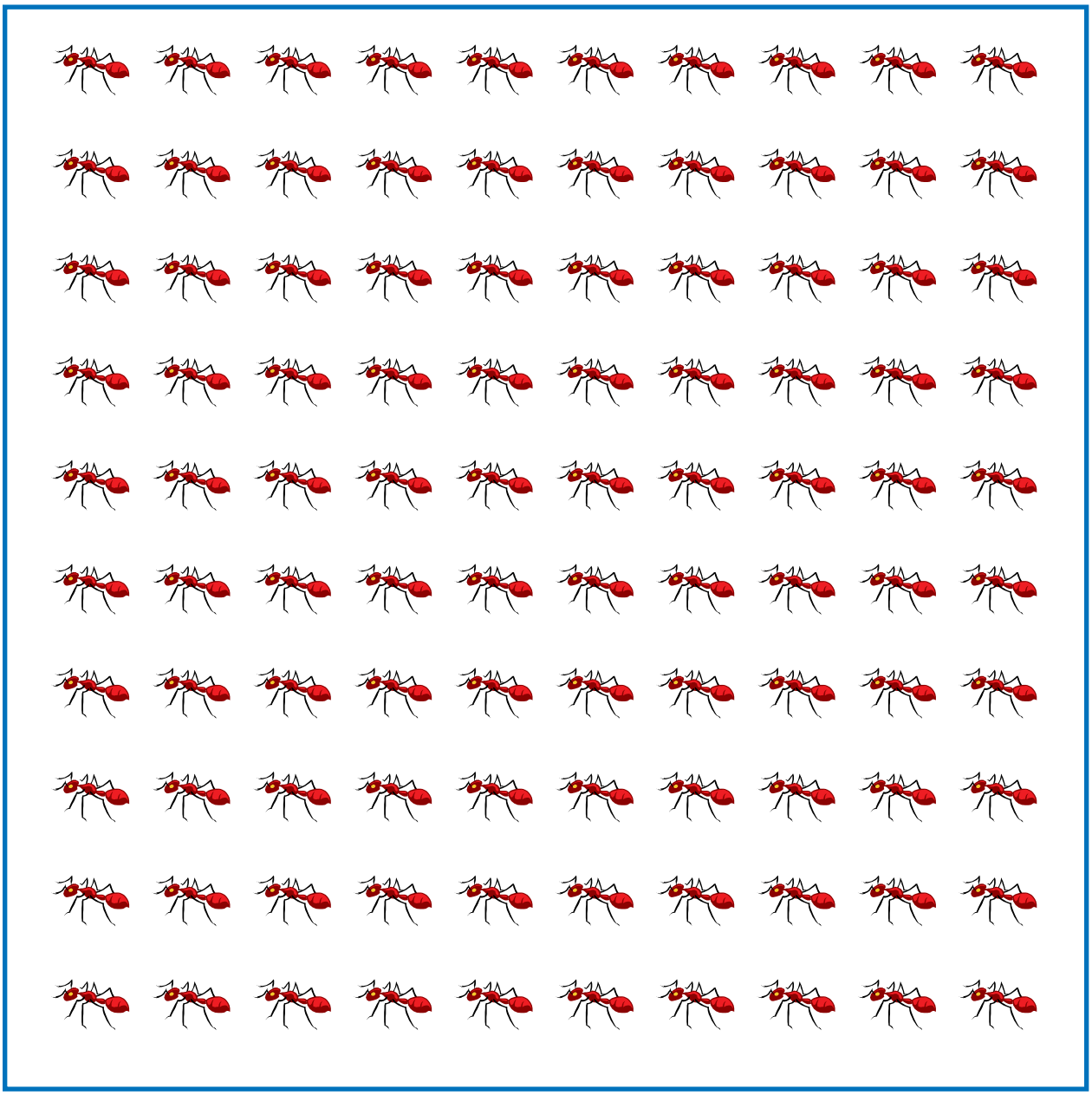
100 Ants



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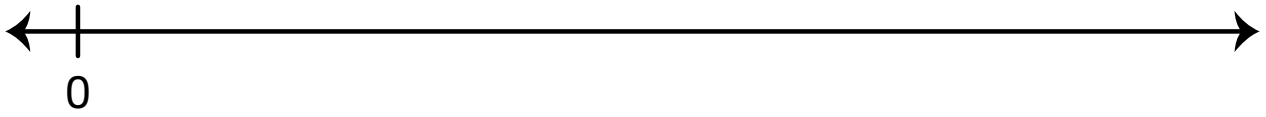
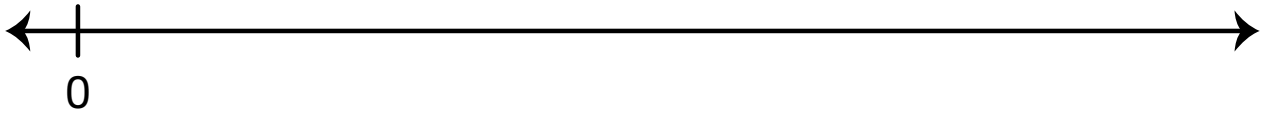
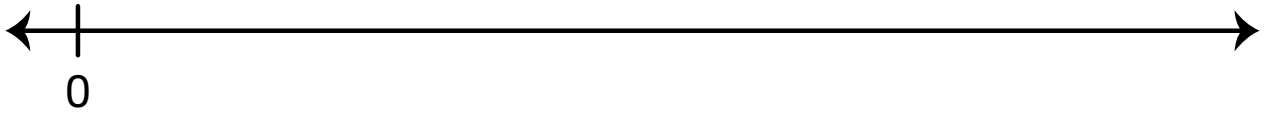
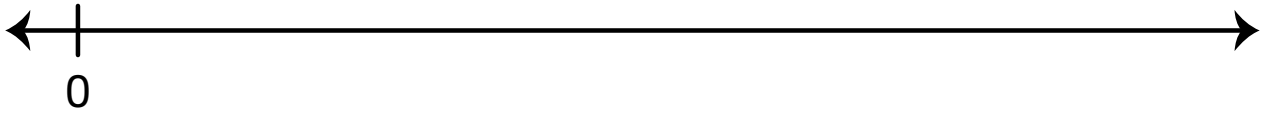
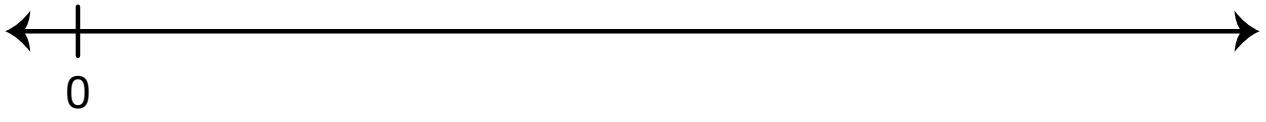
Open Number Lines











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Which is Greater

Homework

Dear Family Member:

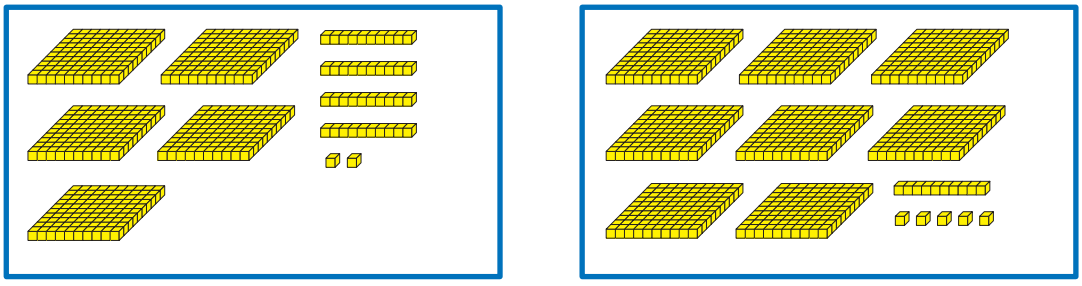
The numbers in each box are represented with base-ten pieces. The pack represents 1000, the flat represents 100, the skinny represents 10, and the bit represents 1. We use the base-ten shorthand system to simplify the recording of base-ten pieces. The symbol ▢ represents 1000, the symbol ▢ represents 100, the symbol | represents 10, and the symbol • represents 1. Thank you.

1. Circle the box that shows the greater number. Write a number sentence using < or > to compare the numbers.

Example

Number sentence 375 > 309

A.



Number sentence _____

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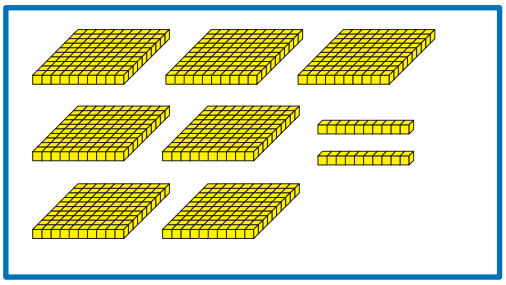
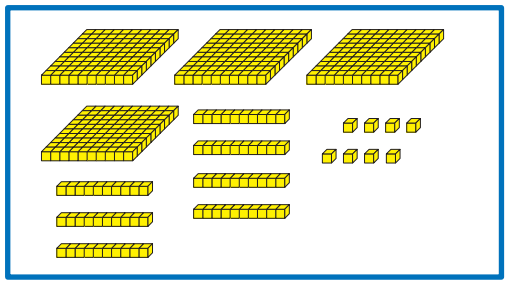
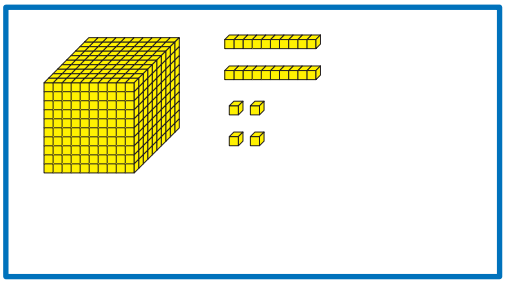
B.

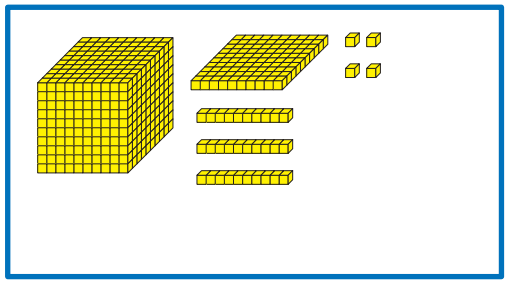




Number sentence _____

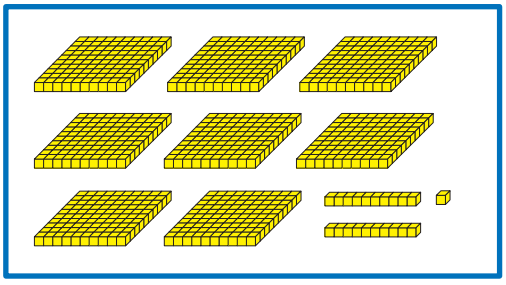
C.

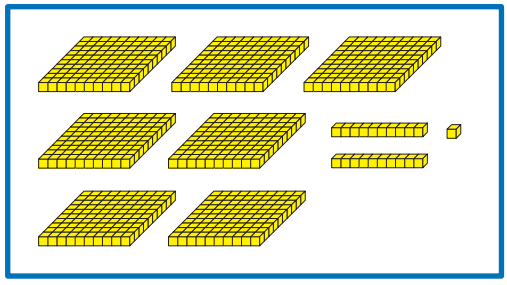




Number sentence _____

D.





Number sentence _____

2. Compare the numbers below. Write < or > in the circle.

A. 699 ◯ 624

B. 1000 ◯ 749

C. 456 ◯ 480

D. 1029 ◯ 901

E. 1077 ◯ 1034

F. 1008 ◯ 1097

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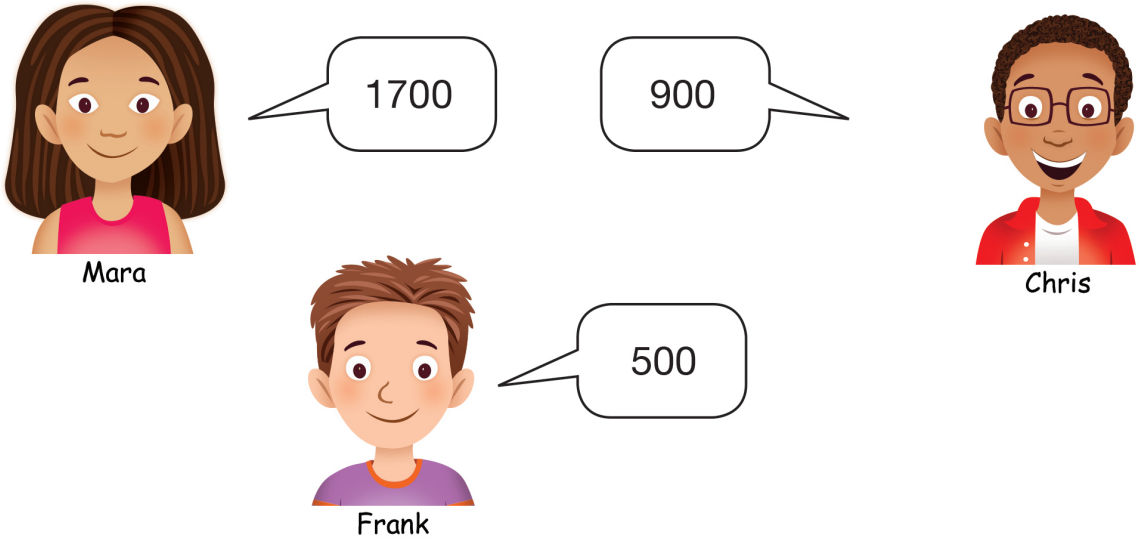
Closest Estimate

Mara, Chris, and Frank had to find the total number of laps the second grade students walked in a week. The four classes reported these totals: 94, 317, 279, and 201 laps. They did not have time to find the exact total, so they estimated the sum. Mara said her estimate was 1700, Chris said his estimate was 900, and Frank said his estimate was 500.



Whose estimate is closest to the actual sum?

How did you estimate the sum?

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Estimation Practice

Homework

Dear Family Member:

In class, we are learning to use estimation to check for reasonable answers to addition problems. Ask your child to explain how he or she estimated the sums for each problem.

Thank you.

For Questions 1–3, estimate the answer for each problem. Circle the estimate that you think is the closest. Show or tell how you estimated the answer.

1. 126 first graders, 268 second graders, and 239 third graders completed laps around the school on the walkathon. What is the closest estimate for the number of students who participated?

A. 1000 **B.** 300 **C.** 600

Show or tell how you estimated the sum.

2. Two second grade classes reported their totals for the week. One class walked 458 laps and the other class walked 499 laps. What is the closest estimate for the number of laps they walked altogether?

A. 1000 **B.** 8157 **C.** 600

Show or tell how you estimated the sum.

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3. The second grade classes walked a total of 624 laps by Thursday. On Friday they walked 279 additional laps. Estimate the total number of laps they walked during the week.

A. 1200 **B.** 400 **C.** 900

Show or tell how you estimated the sum.

4. There are 4 second grade classes at Parker Elementary. They want to walk 1200 laps by the end of the week. The table below shows how many laps each class completed by Friday. Did they reach their goal of 1200 laps?

Walkathon Laps by Room

Classroom	Number of Laps in One Week
Room 117	284
Room 119	198
Room 121	187
Room 123	201

Show or tell how you estimated the sum.

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5. The chart below shows how many laps Mrs. Dewey's class walked each day. Estimate the number of laps they walked for the week.

Walkathon Laps by Day

Day of the Week	Number of Laps
Monday	98
Tuesday	115
Wednesday	85
Thursday	186
Friday	104

Circle the answer that you think is more reasonable.

under 1000 over 1000

Show or tell how you estimated the sum.

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One Way or Another

Homework

Dear Family Member:

Your child has been using strategies to solve addition problems with larger multidigit numbers. Some problems are best solved with mental math, while others are best solved with paper and pencil. Some paper-and-pencil strategies are:

Expanded Form

$$\begin{array}{r} 653 = 600 + 50 + 3 \\ +\ 798 = 700 + 90 + 8 \\ \hline 1300 + 140 + 11 = 1451 \end{array}$$

All Partials

$$\begin{array}{r} 653 \\ +\ 798 \\ \hline 1300 \\ 140 \\ 11 \\ \hline 1451 \end{array}$$

Compact

$$\begin{array}{r} {\scriptstyle 1\ 1} \\ 653 \\ +\ 798 \\ \hline 1451 \end{array}$$

Thank you.

Solve each word problem with mental math or paper and pencil. Show your work and include labels.

1. Carla's family drove 788 miles to Florida. They spent a week on the beach and then drove home. How many miles did they drive to Florida and back?

2. Carla's brothers and sisters collected seashells for a week. The girls collected 617 shells and the boys collected 652 shells. How many shells did they collect altogether?

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3. A museum has a collection of shark teeth. One display case shows 538 teeth and another smaller case shows 426 teeth. How many shark teeth are displayed?

4. Carla bought an ice cream cone for $3.24. Carla's sister bought an ice cream sundae for $5.56. What is the total cost of the ice cream treats?

5. Choose one problem and show how to solve it another way.

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Practice Mental Math

Dear Family Member:

We have been using different mental math strategies to solve subtraction problems: using base-ten pieces, finding friendly numbers, using number lines, and counting back by hundreds. Then we estimate to check if answers make sense. Ask your child to explain how he or she used mental math to solve each problem.

Thank you.

Show or tell how to use mental math to solve each problem. Then estimate to see if the difference is reasonable.

	Problem	Mental Math Subtraction Strategy	Estimate
1.	427 − 99		

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	Problem	Mental Math Subtraction Strategy	Estimate
2.	100 − 67		
3.	803 − 799		
4.	765 − 259		
5.	300 − 150		
6.	909 − 598		

Name _____ Date _____

I Did it My Way

Homework

Dear Family Member:

Your child has been using strategies to solve subtraction problems with larger multidigit numbers. Some problems are best solved with mental math, while others are best solved with paper and pencil. Some paper-and-pencil strategies for subtraction are:

Expanded Form

$$\begin{array}{l} 451 = 400 + 50 + 1 = 400 + 40 + 11 = 300 + 140 + 11 \\ \underline{289 = 200 + 80 + 9 = 200 + 80 + 9 = 200 + 80 + 9} \\ \qquad\qquad\qquad\qquad\qquad\qquad 100 + 60 + 2 = 162 \end{array}$$

Compact

$$\begin{array}{r} {\scriptstyle 14} \\ {\scriptstyle 3\,\cancel{4}\,11} \\ \cancel{4}\cancel{5}\cancel{1} \\ \underline{-\ 289} \\ 162 \end{array}$$

They use addition to check their subtraction:

$$\begin{array}{rl} 162 & \text{(answer)} \\ \underline{+\ 289} & \text{(number subtracted)} \\ 451 & \text{(starting number)} \end{array}$$

Thank you.

1. Choose a way to solve each problem. Show your work.

A. 864 − 382 =

B. 743 − 201 =

C. 657 − 458 =

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Use mental math or paper and pencil to solve each word problem. Estimate first. Show your work, and include number sentences and labels.

2. 320 people walked in a huge beach walkathon. 113 of the walkers were children. How many walkers were adults?

Estimate:

Number sentence _____

3. The Seaside Swim Team recorded the number of laps they swam. Group A swam 563 laps. Group B swam 472 laps.

A. Which group swam more laps?

B. How many more laps did that group swim than the other group?

Estimate:

Number sentence _____

4. Choose one problem from Questions 1–3 and use addition to check your subtraction.

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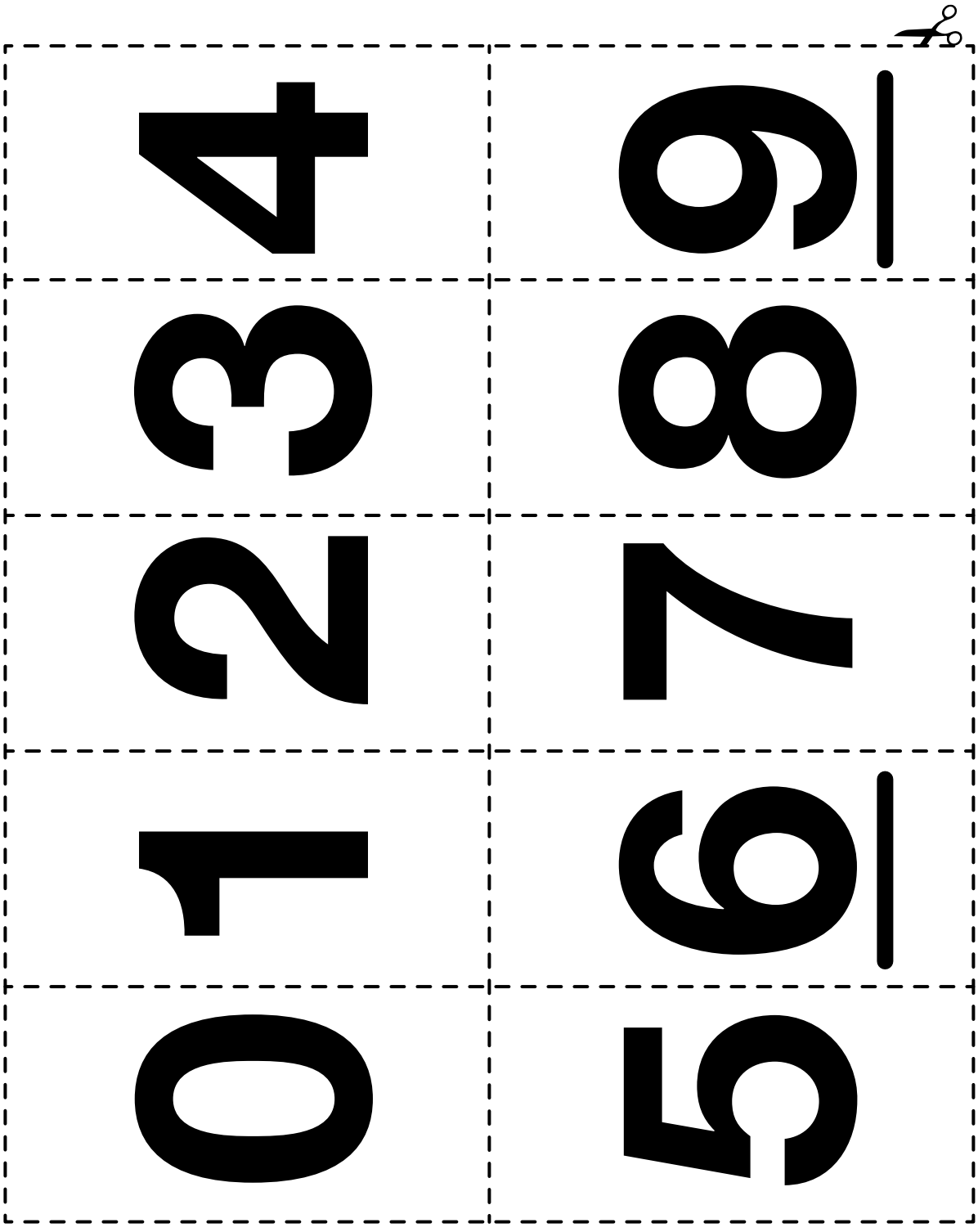
Digit Cards 0–9



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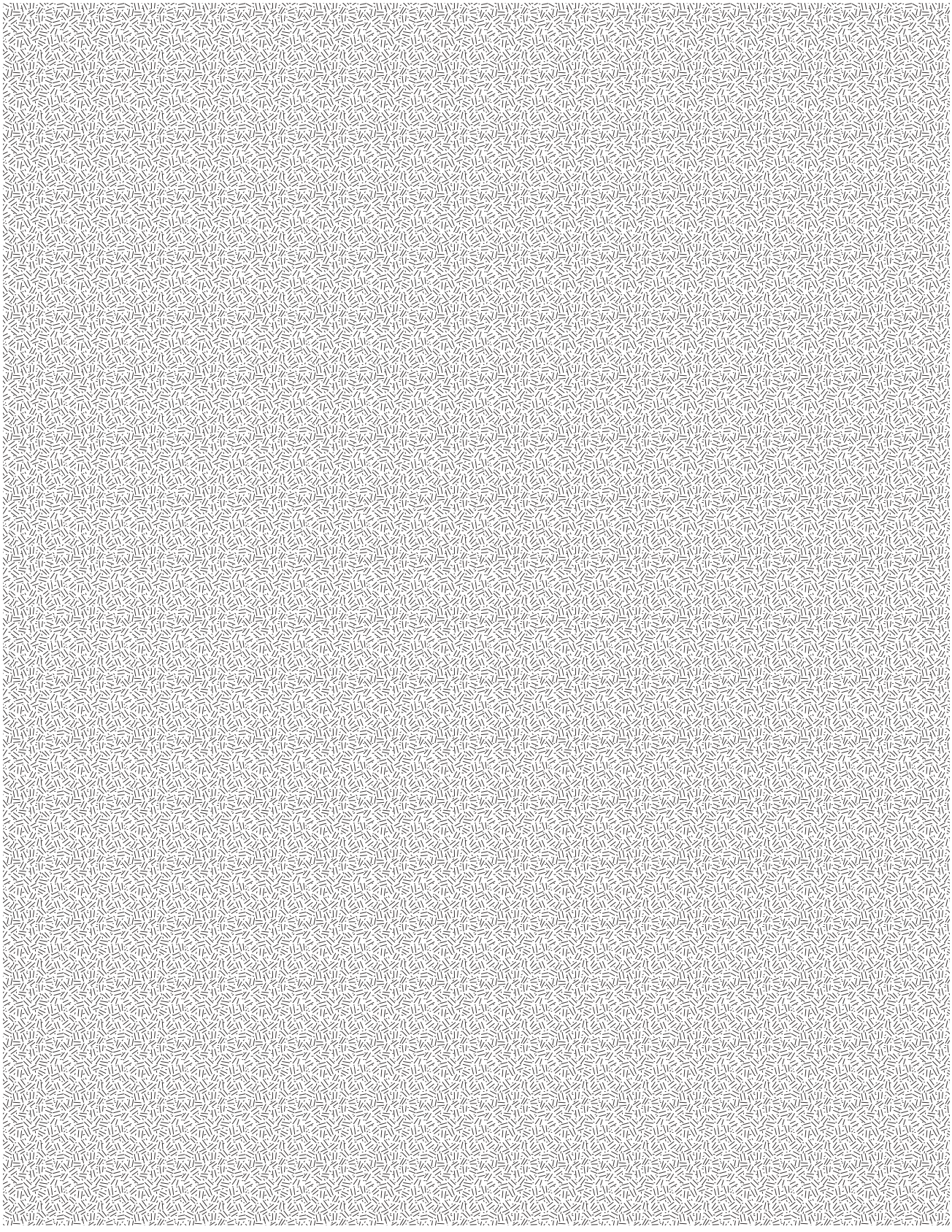

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