



Second Grade Math

This packet includes four sections that cover the major content of 2nd grade math. Each section includes multiple pages of notes and practice for each topic. For additional support, visit KCS TV on YouTube for instructional videos that accompany each section.

The following content is included in this packet:

Topic			
I. Geometry	II. Represent Addition and Subtraction Problems	III. Use Place Value to Add and Subtract	IV. Addition and Subtraction with Length
Identify shapes and attributes	Add using words, pictures, equations, or objects	Add and subtract with two-digit numbers	Compare lengths
Tiling Rectangles	Subtract using words, pictures, equations, or objects	Add and subtract with three-digit numbers	Word problems with lengths
Halves, Thirds, and Fourths			Match word problems with equations

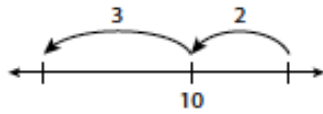
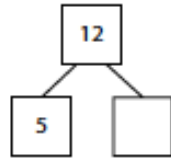
Activity Set 2: Represent with words, pictures, equations, or objects to solve addition/subtraction problems

<p>A cart has 14 books. There are 6 on the bottom shelf. The rest are on the top shelf. How many books are on the top shelf?</p> <p>You can use a tape diagram. Write what you know. Write a number sentence. Solve.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>total</p> <table border="1" style="margin: 0 auto;"> <tr><td colspan="2" style="text-align: center;">total</td></tr> <tr><td style="width: 50px; height: 30px;">part</td><td style="width: 50px; height: 30px;">part</td></tr> </table> </div> <div style="text-align: center;"> <p>14</p> <table border="1" style="margin: 0 auto;"> <tr><td colspan="2" style="text-align: center;">14</td></tr> <tr><td style="width: 50px; height: 30px;">6</td><td style="width: 50px; height: 30px;">?</td></tr> </table> </div> <div style="text-align: center;"> <p>$14 - 6 = ?$</p> <p>$14 - 6 = 8$</p> </div> </div> <p>There are 8 books on the top shelf.</p>	total		part	part	14		6	?	<p>Maya has 4 hamsters and some mice. She has 3 fewer hamsters than mice. How many mice does Maya have?</p> <p>Think about what you know.</p> <p>There are 3 fewer hamsters than mice. That means there are 3 more mice than hamsters.</p> <p>Draw a picture.</p> <div style="display: flex; align-items: center;"> <p style="margin-right: 10px;">hamsters</p> <table border="1" style="border-collapse: collapse;"> <tr><td style="width: 20px; height: 20px;"> </td><td style="width: 20px; height: 20px;"> </td><td style="width: 20px; height: 20px;"> </td><td style="width: 20px; height: 20px;"> </td><td style="width: 20px; height: 20px;"> </td></tr> </table> </div> <div style="display: flex; align-items: center; margin-top: 5px;"> <p style="margin-right: 10px;">mice</p> <table border="1" style="border-collapse: collapse;"> <tr><td style="width: 20px; height: 20px;"> </td><td style="width: 20px; height: 20px;"> </td><td style="width: 20px; height: 20px;"> </td><td style="width: 20px; height: 20px;"> </td><td style="width: 20px; height: 20px;"> </td><td style="width: 20px; height: 20px;"> </td><td style="width: 20px; height: 20px;"> </td></tr> </table> </div> <p>Write a number sentence. $4 + 3 = 7$</p> <p>Maya has 7 mice.</p>												
total																					
part	part																				
14																					
6	?																				
<p>Add $8 + 5$.</p> <p>Think of a number path. Start at 8. Add 2 to make 10.</p> <p>You need to add 3 more.</p> <p>$5 = 2 + 3$</p> <p>So, $8 + 5 = 13$.</p> <div style="text-align: center; margin-top: 20px;"> <table border="1" style="margin: 0 auto;"> <tr><td style="width: 20px; height: 20px;">2</td><td style="width: 20px; height: 20px;">3</td></tr> </table> </div>	2	3	<p>Example</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>$8 + 7 = ?$</p> <p>$8 + 2 + ?$</p> </div> <div style="text-align: center;"> <table border="1" style="margin: 0 auto;"> <tr><td style="width: 20px; height: 20px;">2</td></tr> </table> <p>The partners 8 and 2 make 10.</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-start; margin-top: 20px;"> <div style="text-align: center;"> <p>$8 + 7 = ?$</p> <p>$8 + 2 + 5$</p> </div> <div style="text-align: center;"> <table border="1" style="margin: 0 auto;"> <tr><td style="width: 20px; height: 20px;">2</td><td style="width: 20px; height: 20px;">5</td></tr> </table> <p>Add 5, the other partner of 7.</p> </div> </div> <p>So, $8 + 7 = 15$.</p>	2	2	5															
2	3																				
2																					
2	5																				
<p>Example</p> <p>There are 7 balls in the gym closet. Then 3 balls are taken out. After class, 9 balls are returned. How many balls are in the closet now?</p> <p>Step 1 7 balls – 3 balls = 4 balls</p> <p>Step 2 4 balls + 9 balls = 13 balls</p> <p><i>Answer:</i> There are 13 balls in the closet now.</p> <div style="text-align: center; margin-top: 20px;"> <table border="1" style="margin: 0 auto;"> <tr><td style="width: 40px; height: 30px;">7</td></tr> <tr><td style="width: 50px; height: 30px;">3</td><td style="width: 50px; height: 30px;">4</td></tr> <tr><td style="width: 50px; height: 30px;">4</td><td style="width: 50px; height: 30px;">9</td></tr> <tr><td colspan="2" style="text-align: center;">13</td></tr> </table> </div>	7	3	4	4	9	13		<p>There are 8 apples and some bananas on the counter. Someone buys 3 apples. Now there are 4 more bananas than apples. How many bananas are there?</p> <p>Step 1 8 apples – 3 apples</p> <p>Step 2 There are 5 apples. There are 4 more bananas than apples.</p> <p><i>Answer:</i> There are 9 bananas.</p> <div style="text-align: center; margin-top: 20px;"> </div>													
7																					
3	4																				
4	9																				
13																					

Activity Set 2: Represent with words, pictures, equations, or objects to solve addition/subtraction problems

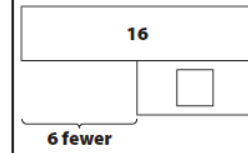
Practice

Show how to solve $12 - 5$ with both models.

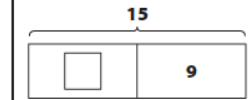


$12 - 5 = \underline{\quad}$

$7 = \square - 9$

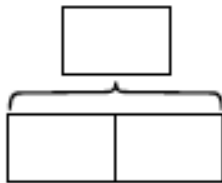


$4 + \square - 3 = 8$



Myra has 14 beads. There are 6 white beads. The rest are green. How many green beads does Myra have?

Use the tape diagram to show the problem. Then write two number sentences.



$\underline{\quad} - \underline{\quad} = \underline{\quad}$

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

Answer: _____

Match the word problem to the correct equation and solve.

Carla had 8 pencils. She put some in a box and has _____ pencils left. How many pencils did Carla put in the box?

$7 + 7 = \square$

Omar had some baseball cards. He gave 8 cards to a friend and had _____ cards left. How many baseball cards did Omar have before he gave some away?

$8 + 9 = \square$

On Monday, Lexi's family drove 8 miles to the beach and then they drove _____ miles to the zoo. How many miles did they drive on Monday?

$8 - \square = 7$

Mona has two pails. She puts _____ shells in each pail. How many shells are in the two pails?

$9 - 6 = \square$

There are 6 books on the top shelf and _____ books on the bottom shelf. How many more books are on the bottom shelf than the top shelf?

$\square - 8 = 5$

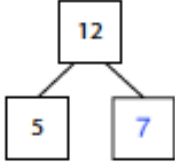
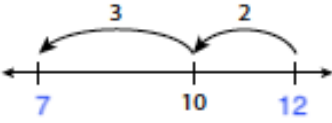
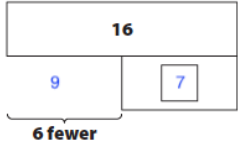
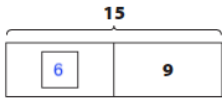
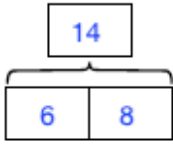
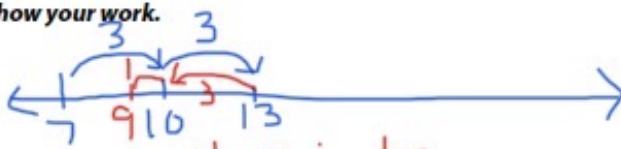
Tara has 7 points. She gets 6 more on her next turn. On her last turn, she loses points. She ends with 9 points. How many points did Tara lose on her last turn?

Show your work.

Answer: _____

Activity Set 2: Represent with words, pictures, equations, or objects to solve addition/subtraction problems

Answer Key

<p>Show how to solve $12 - 5$ with both models.</p> <div style="text-align: center;">  </div> <div style="text-align: center; margin-top: 20px;">  </div> <p style="text-align: center;">$12 - 5 = \underline{7}$</p>	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>$7 = \boxed{16} - 9$</p> <hr/> <p>$4 + \boxed{7} - 3 = 8$</p> </div> <div style="width: 50%; text-align: center;">  </div> </div> <hr/> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"></div> <div style="width: 50%; text-align: center;">  </div> </div>
<p>Myra has 14 beads. There are 6 white beads. The rest are green. How many green beads does Myra have?</p> <p>Use the tape diagram to show the problem. Then write two number sentences.</p> <div style="text-align: center; margin: 10px 0;">  </div> <div style="text-align: center; margin: 10px 0;"> $\begin{array}{r} 14 - 6 = 8 \\ 14 = 6 + 8 \end{array}$ </div> <p>Answer: <u>8 green beads</u></p>	<div style="display: flex; flex-direction: column; gap: 10px;"> <div style="border: 1px solid black; padding: 5px;"> <p>Carla had 8 pencils. She put some in a box and has <u>7</u> pencils left. How many pencils did Carla put in the box?</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p>Omar had some baseball cards. He gave 8 cards to a friend and had <u>5</u> cards left. How many baseball cards did Omar have before he gave some away?</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p>On Monday, Lexi's family drove 8 miles to the beach and then they drove <u>9</u> miles to the zoo. How many miles did they drive on Monday?</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p>Mona has two pails. She puts <u>7</u> shells in each pail. How many shells are in the two pails?</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p>There are 6 books on the top shelf and <u>9</u> books on the bottom shelf. How many more books are on the bottom shelf than the top shelf?</p> </div> </div> <div style="margin-top: 20px; text-align: right;"> <p>$7 + 7 = \boxed{14}$</p> <p>$8 + 9 = \boxed{17}$</p> <p>$8 - \boxed{1} = 7$</p> <p>$9 - 6 = \boxed{3}$</p> <p>$\boxed{13} - 8 = 5$</p> </div>
<p>Tara has 7 points. She gets 6 more on her next turn. On her last turn, she loses points. She ends with 9 points. How many points did Tara lose on her last turn?</p> <p>Show your work.</p> <div style="text-align: center; margin: 10px 0;">  </div> <p>Answer: <u>4 points</u></p>	