Algebra • Ways to Expand Numbers

Essential Question: How can you write a two-digit number in different ways?

There are different ways to think about a number.

\[
\begin{align*}
8 \text{ tens} & \quad 7 \text{ ones} \\
80 + 7 & \quad 87
\end{align*}
\]

Share and Show

Write how many tens and ones.
Write the number in two different ways.

1. ___ tens ___ ones
   ____ + ____

2. ___ tens ___ ones
   ____ + ____
**On Your Own**

Write how many tens and ones. Write the number in two different ways.

3. [Image of base-ten blocks]
   
   ____ tens ____ ones
   ____ + ____

4. [Image of base-ten blocks]
   
   ____ tens ____ ones
   ____ + ____

**Problem Solving**

5. Draw the same number using only tens. Write how many tens and ones. Write the number in two different ways.

5. [Image of base-ten blocks]
   
   ____ tens ____ ones
   ____ + ____

   ____ tens ____ ones
   ____ + ____

**TAKE HOME ACTIVITY**

Write a two-digit number to 99. Ask your child to write how many tens and ones and then write the number a different way.
Identify Place Value

Essential Question How can you use place value to understand the value of a number?

Model and Draw

The 1 in 125 means 1 hundred.
The 1 in 125 means 2 tens.
The 5 in 125 means 5 ones.

<table>
<thead>
<tr>
<th>Draw for</th>
<th>Draw for</th>
<th>Draw for</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

| 125       |          |          |

<table>
<thead>
<tr>
<th>hundreds</th>
<th>tens</th>
<th>ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

Share and Show

Use your MathBoard and to show the number. Draw to complete the quick picture. Write how many hundreds, tens, and ones.

1. 106

<table>
<thead>
<tr>
<th>hundreds</th>
<th>tens</th>
<th>ones</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

THINK

106 has no tens.

Math Talk How is the 1 in 187 different from the 1 in 781?
On Your Own

Use your MathBoard and .
Draw to complete the quick picture.
Write how many hundreds, tens, and ones.

2. 170

<table>
<thead>
<tr>
<th>hundreds</th>
<th>tens</th>
<th>ones</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. 143

<table>
<thead>
<tr>
<th>hundreds</th>
<th>tens</th>
<th>ones</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. 121

<table>
<thead>
<tr>
<th>hundreds</th>
<th>tens</th>
<th>ones</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Problem Solving

Circle your answer.

5. I have 1 hundred, 9 tens, and 9 ones. What number am I?

99 100 199

6. I have 3 ones, 0 tens, and 1 hundred. What number am I?

107 170 103

TAKE HOME ACTIVITY • Write some numbers from 100 to 199. Have your child tell how many hundreds, tens, and ones are in the number.
Use Place Value to Compare Numbers

Essential Question  How can you use place value to compare two numbers?

Use these symbols to compare numbers.

\[ > \text{ is greater than} \quad 45 \quad 46 \quad 45 < 46 \]
\[ < \text{ is less than} \quad 45 \text{ is less than } 46 \]
\[ = \text{ is equal to} \]

Compare 134 and 125.

First compare hundreds.
One hundred is equal to one hundred.
\[ 100 = 100 \]
If the hundreds are equal, compare the tens. 30 is greater than 20.
\[ 134 > 125 \]

Share and Show

Write the numbers and compare. Write >, <, or =.

1. \[ 159 \quad > \quad 155 \]

Compare the numbers using >, <, or =.

3. 187 \[ 168 \] 4. 165 \[ 159 \] 5. 127 \[ 141 \]

Math Talk  Compare 173 and 177. Did you have to compare all the digits? Why or why not?
**On Your Own**

Write the numbers. Compare. Write $>$, $<$, or $=$.

<table>
<thead>
<tr>
<th>6.</th>
<th>7.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Compare the numbers using $>$, $<$, or $=$.

<table>
<thead>
<tr>
<th>8.</th>
<th>143</th>
<th>143</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.</td>
<td>162</td>
<td>157</td>
</tr>
<tr>
<td>10.</td>
<td>185</td>
<td>188</td>
</tr>
<tr>
<td>11.</td>
<td>124</td>
<td>129</td>
</tr>
<tr>
<td>12.</td>
<td>189</td>
<td>195</td>
</tr>
<tr>
<td>13.</td>
<td>135</td>
<td>135</td>
</tr>
<tr>
<td>14.</td>
<td>173</td>
<td>164</td>
</tr>
<tr>
<td>15.</td>
<td>123</td>
<td>117</td>
</tr>
<tr>
<td>16.</td>
<td>118</td>
<td>131</td>
</tr>
<tr>
<td>17.</td>
<td>155</td>
<td>145</td>
</tr>
<tr>
<td>18.</td>
<td>181</td>
<td>181</td>
</tr>
<tr>
<td>19.</td>
<td>192</td>
<td>179</td>
</tr>
<tr>
<td>20.</td>
<td>122</td>
<td>129</td>
</tr>
<tr>
<td>21.</td>
<td>166</td>
<td>177</td>
</tr>
<tr>
<td>22.</td>
<td>154</td>
<td>154</td>
</tr>
</tbody>
</table>

**Problem Solving**

23. Antonio is thinking of a number between 100 and 199. It has 1 hundred, 3 tens, and 6 ones. Kim is thinking of a number between 100 and 199. It has 1 hundred, 6 tens, and 3 ones. Who is thinking of a greater number?

_____ is thinking of a greater number.

**Take Home Activity** • Choose two numbers between 100 and 199 and have your child explain which number is greater.
Write how many tens and ones. Write the number in two ways.

1. 

   ____ tens and ____ ones
   _____ + _____

2. 

   ____ tens and ____ one
   _____ + _____

Use your MathBoard and .
Draw to complete the quick picture.
Write how many hundreds, tens, and ones.

3. 154

   | hundreds | tens | ones |
   | ________ | ____ | ____ |

4. 128

   | hundreds | tens | ones |
   | ________ | ____ | ____ |
Write the numbers and compare. Write $>$, $<$, or $=$.

5. $\square$ $\bigcirc$ $\square$

6. $\square$ $\bigcirc$ $\square$

Compare the numbers using $>$, $<$, or $=$.

7. $175 \bigcirc 175$
8. $163 \bigcirc 173$
9. $189 \bigcirc 188$
10. $142 \bigcirc 158$
11. $157 \bigcirc 157$
12. $185 \bigcirc 180$

13. Which comparison is correct?
   - $132 > 131$
   - $131 = 132$
   - $131 > 132$
   - $131 > 132$
**Algebra • Addition Function Tables**

**Essential Question** How can you follow a rule to complete an addition function table?

**Model and Draw**

The rule is Add 9. Add 9 to each number.

<table>
<thead>
<tr>
<th>Add 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>9</td>
</tr>
</tbody>
</table>

**Share and Show**

Follow a rule to complete the table.

1. **Add 3**
   - 7
   - 8
   - 9

2. **Add 4**
   - 6
   - 7
   - 8

3. **Add 5**
   - 5
   - 7
   - 9

4. **Add 8**
   - 5
   - 7
   - 9

5. **Add 7**
   - 6
   - 8
   - 9

6. **Add 6**
   - 6
   - 8
   - 9

**Math Talk** Look at Exercise 4. How does the rule help you see a pattern?
Follow a rule to complete the table.

7. Add 7
   7
   8
   9

8. Add 4
   7
   8
   9

9. Add 5
   7
   8
   9

10. Add 8
    4
    6
    8
    9

11. Add 3
    3
    5
    7
    9

12. Add 6
    6
    7
    8
    9

### Problem Solving


   Tom is 8 years old.  
   Julie is 7 years old.  
   Carla is 4 years old.  
   How old will each child be in 4 years?

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tom</td>
<td>Julie</td>
<td>Carla</td>
</tr>
<tr>
<td>8</td>
<td>7</td>
<td>4</td>
</tr>
</tbody>
</table>
Algebra • Subtraction Function Tables

Essential Question  How can you follow a rule to complete a subtraction function table?

Model and Draw

The rule is Subtract 7. Subtract 7 from each number.

<table>
<thead>
<tr>
<th>Subtract 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 7</td>
</tr>
<tr>
<td>15 8</td>
</tr>
<tr>
<td>16 9</td>
</tr>
</tbody>
</table>

Share and Show

Follow a rule to complete the table.

1. Subtract 3

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>11</td>
</tr>
</tbody>
</table>

2. Subtract 4

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>10</td>
</tr>
</tbody>
</table>

3. Subtract 5

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>10</td>
</tr>
</tbody>
</table>

4. Subtract 8

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
</tr>
<tr>
<td>11</td>
</tr>
<tr>
<td>13</td>
</tr>
</tbody>
</table>

5. Subtract 7

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>12</td>
</tr>
<tr>
<td>13</td>
</tr>
<tr>
<td>14</td>
</tr>
</tbody>
</table>

6. Subtract 6

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>9</td>
</tr>
</tbody>
</table>

Math Talk  How can Exercise 2 help you solve Exercise 3?
Follow a rule to complete the table.

### Subtract 4

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>11</td>
<td></td>
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<tr>
<td>12</td>
<td></td>
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<tr>
<td>13</td>
<td></td>
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</tbody>
</table>

### Subtract 6

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>7</td>
<td></td>
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<tr>
<td>8</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

### Subtract 5

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

### Subtract 7

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>

### Subtract 8

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>

### Subtract 9

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>


Jane has 4 cookies.
Lucy has 3 cookies.
Seamus has 2 cookies.

How many cookies will each child have if they each eat 2 cookies?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Jane</td>
<td>4</td>
</tr>
<tr>
<td>Lucy</td>
<td>3</td>
</tr>
<tr>
<td>Seamus</td>
<td>2</td>
</tr>
</tbody>
</table>

TAKE HOME ACTIVITY • Copy Exercise 12 and change the numbers in the left column to 10, 11, 12, and 13. Have your child complete the table and explain how he or she used a rule to solve the problem.

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Algebra • Follow the Rule

Essential Question: How can you follow a rule to complete an addition or subtraction function table?

Model and Draw

The rule for some tables is to add. For other tables the rule is to subtract.

<table>
<thead>
<tr>
<th>Add 1</th>
<th>Subtract 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>

Share and Show

Follow a rule to complete the table.

1. Add 2
   - 10
   - 9
   - 8
   - 7
2. Subtract 2
   - 10
   - 9
   - 8
   - 7
3. Subtract 1
   - 3
   - 4
   - 7
   - 9

Math Talk

What is the rule for the pattern in Exercise 1?
Follow a rule to complete the table.

4. **Add 5**
   - 7
   - 8
   - 9
   - 10

5. **Subtract 5**
   - 7
   - 8
   - 9
   - 10

6. **Subtract 1**
   - 8
   - 9
   - 11
   - 13

7. **Subtract 3**
   - 5
   - 7
   - 9
   - 11

8. **Add 4**
   - 6
   - 7
   - 8
   - 9

9. **Add 6**
   - 9
   - 8
   - 7
   - 6

10. Find the rule. Complete the table.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8</td>
</tr>
<tr>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>12</td>
</tr>
</tbody>
</table>

**Problem Solving**

**Real World**

**Take Home Activity**

Copy the table for Exercise 9. Change the rule to Subtract 3. Have your child complete the table.
Add 3 Numbers

Essential Question  How can you choose a strategy to help add 3 numbers?

Model and Draw

When you add 3 numbers, you can add in any order. Using a strategy can help.

Make a 10.  Use doubles.  Use count on.

\[
\begin{align*}
2 & \quad 8 \quad 6 \\
6 & \quad 8 \quad 4 \\
+8 & \quad +4 \quad +3 \\
10 & \quad 16 \quad 9 \\
+6 & \quad 20 \quad 17 \\
\end{align*}
\]

Share and Show

Use strategies to find the sums. Circle any strategy you use.

1. 4 make a 10 2. 9 make a 10 3. 4 make a 10
   7 doubles 8 doubles 6 doubles
   \[\begin{align*}
   +7 & \quad +1 \\
   \text{count on} & \quad \text{count on} \\
   \end{align*}\]

4. 8 make a 10 5. 6 make a 10 6. 6 make a 10
   4 doubles 3 doubles 7 doubles
   \[\begin{align*}
   +2 & \quad +6 \\
   \text{count on} & \quad \text{count on} \\
   \end{align*}\]

Math Talk  Explain why you used the make a 10 strategy to solve Exercise 6.
Use a strategy to find the sum. Circle the strategy you choose.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7.</td>
<td>5 make a 10</td>
<td>8.</td>
</tr>
<tr>
<td></td>
<td>5 doubles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>+ 5 count on</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>4 make a 10</td>
<td>11.</td>
</tr>
<tr>
<td></td>
<td>2 doubles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>+ 7 count on</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>9 make a 10</td>
<td>14.</td>
</tr>
<tr>
<td></td>
<td>2 doubles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>+ 8 count on</td>
<td></td>
</tr>
</tbody>
</table>

16. Christine has 7 red buttons, 3 blue buttons, and 4 yellow buttons. How many buttons does she have?

___ buttons

TAKE HOME ACTIVITY • Ask your child to choose 3 numbers from 1 to 9. Have your child add to find the sum.
Add a One-Digit Number to a Two-Digit Number

Essential Question How can you find the sum of a 1-digit number and a 2-digit number?

Model and Draw

What is $54 + 2$?

To find the sum, find how many **tens** and **ones** in all.

$$
\begin{array}{c}
5 \text{ tens} \\
\hline
+ \\
\hline
4 \text{ ones} \\
\hline
\end{array}
+ \begin{array}{c}
2 \text{ ones} \\
\hline
\end{array}

= \begin{array}{c}
\underline{5} \text{ tens} \\
\hline
\underline{6} \text{ ones} \\
\hline
\end{array}
$$

Share and Show

Add. Write the sum.

1. $72 + 3$
2. $24 + 1$
3. $41 + 4$
4. $56 + 2$
5. $14 + 4$
6. $33 + 6$
7. $61 + 8$
8. $93 + 4$
9. $31 + 6$
10. $11 + 7$
11. $40 + 4$
12. $35 + 3$

Math Talk

How did you find the total number of ones in Exercise 1?
On Your Own

Add. Write the sum.

13. 22  
    + 7  

14. 53  
    + 3  

15. 46  
    + 2  

16. 71  
    + 8  

17. 84  
    + 5  

18. 93  
    + 4  

19. 16  
    + 3  

20. 37  
    + 1  

21. 62  
    + 2  

22. 23  
    + 5  

23. 82  
    + 2  

24. 44  
    + 4  

Problem Solving

25. There are 23 children in the first grade class. Then 3 more children join the class. How many children are there now?  ____ children

TAKE HOME ACTIVITY • Tell your child you had 12 pennies and then you got 5 more. Have your child add to find how many pennies in all.
Add Two-Digit Numbers

Essential Question: How can you find the sum of two 2-digit numbers?

Model and Draw

What is 23 + 14?

You can find how many tens and ones in all.

\[
\begin{array}{c}
2 \text{ tens} \\
+ 1 \text{ ten}
\end{array} \quad \begin{array}{c}
3 \text{ ones} \\
+ 4 \text{ ones}
\end{array} \quad \begin{array}{c}
2 \text{ 3} \text{ tens} \\
+ 1 \text{ 4}
\end{array}
\]

\[
\begin{array}{c}
3 \text{ tens} \\
+ 7 \text{ ones}
\end{array} \quad \begin{array}{c}
3 \text{ 7}
\end{array}
\]

Share and Show

Add. Write the sum.

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>82</td>
<td>+12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>25</td>
<td>+43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>15</td>
<td>+14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>71</td>
<td>+12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>36</td>
<td>+21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>43</td>
<td>+41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>57</td>
<td>+32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>21</td>
<td>+12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>12</td>
<td>+12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>41</td>
<td>+21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>32</td>
<td>+41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>51</td>
<td>+14</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Math Talk
How many tens are in 26 + 11?
How do you know?
Add. Write the sum.

13. 83 + 12  
    84
14. 73 + 21  
    94
15. 16 + 51  
    67
16. 23 + 43  
    66
17. 24 + 55  
    79
18. 67 + 21  
    88
19. 64 + 23  
    87
20. 51 + 24  
    75
21. 26 + 32  
    58
22. 51 + 25  
    76
23. 46 + 22  
    68
24. 34 + 45  
    79

25. Emma has 21 hair clips.  
    Her sister has 11 hair clips.  
    How many hair clips do the girls have together?  
    ____ hair clips

TAKE HOME ACTIVITY • Tell your child you drove 21 miles and then you drove 16 more. Have your child add to find how many miles in all.
Revised Addition

Essential Question: How can you find how many items there are in equal groups without counting one at a time?

Model and Draw

When all groups have the same number they are equal groups.

Ayita is putting 2 plants on each step up to her porch. She has 4 steps. How many plants does she need?

There are 4 equal groups. There are 2 in each group. Add to find how many in all.

\[ \begin{array}{c}
2 + 2 + 2 + 2 = 8 \\
\end{array} \]

Ayita needs 8 plants.

Share and Show

Use your MathBoard and . Make equal groups. Complete the addition sentence.

<table>
<thead>
<tr>
<th>Number of Equal Groups</th>
<th>Number in Each Group</th>
<th>How many in all?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 4</td>
<td>3</td>
<td>____ + ____ + ____ + ____ = ____</td>
</tr>
<tr>
<td>2. 2</td>
<td>5</td>
<td>____ + ____ = ____</td>
</tr>
<tr>
<td>3. 3</td>
<td>4</td>
<td>____ + ____ + ____ = ____</td>
</tr>
</tbody>
</table>

Math Talk: How can you use addition to find 5 groups of 4?
On Your Own

Use your MathBoard and ○. Make equal groups. Complete the addition sentence.

<table>
<thead>
<tr>
<th>Number of Equal Groups</th>
<th>Number in Each Group</th>
<th>How many in all?</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. 2</td>
<td>3</td>
<td>____ + ____ = ____</td>
</tr>
<tr>
<td>5. 3</td>
<td>5</td>
<td>____ + ____ + ____ = ____</td>
</tr>
<tr>
<td>6. 4</td>
<td>4</td>
<td>____ + ____ + ____ + ____ = ____</td>
</tr>
<tr>
<td>7. 4</td>
<td>5</td>
<td>____ + ____ + ____ + ____ = ____</td>
</tr>
<tr>
<td>8. 5</td>
<td>7</td>
<td>____ + ____ + ____ + ____ + ____ = ____</td>
</tr>
</tbody>
</table>

Problem Solving

Solve.

9. There are 3 flower pots. There are 2 flowers in each flower pot. How many flowers are there?
   ____ flowers

10. There are 2 plants. There are 4 leaves on each plant. How many leaves are there?
    ____ leaves

TAKE HOME ACTIVITY • Use dry cereal or pasta to make 3 equal groups of 5. Ask your child to find the total number of items.
Use Repeated Addition to Solve Problems

Essential Question: How can you use repeated addition to solve problems?

**Model and Draw**

Dyanna will have 3 friends at her party. She wants to give each friend 4 balloons. How many balloons does Dyanna need?

Think: \(4 + 4 + 4 = 12\)

12 balloons

**Share and Show**

Draw pictures to show the story. Write the addition sentence to solve.

1. Ted plays with 2 friends. He wants to give each friend 5 cards. How many cards does Ted need?
   
   ____ cards

2. Aisha shops with 4 friends. She wants to buy each friend 2 roses. How many roses does Aisha need?
   
   ____ roses

**Math Talk**

What pattern can you use to find the answer to Exercise 2?
On Your Own

Draw pictures to show the story. Write the addition sentence to solve.

3. Lea plays with 3 friends. She wants to give each friend 5 ribbons. How many ribbons does Lea need?

____ ribbons

4. Harry shops with 5 friends. He wants to buy each friend 2 pens. How many pens does Harry need?

____ pens

5. Cam plays with 4 friends. She wants to give each friend 4 stickers. How many stickers does Cam need?

____ stickers

Problem Solving

Circle the way you can model the problem. Then solve.

6. There are 4 friends. Each friend has 3 apples. How many apples are there?

____ apples.
Follow the rule to complete each table.

1. **Add 3**
   |   |   |
|---|---|---|
| 2 |   |   |
| 4 |   |   |
| 6 |   |   |
| 8 |   |   |

2. **Subtract 7**
   |   |   |
|---|---|---|
| 10|   |   |
| 12|   |   |
| 13|   |   |
| 14|   |   |

3. **Add 6**
   |   |
|---|---|
| 10|   |
| 9 |   |
| 8 |   |
| 7 |   |

4. **Subtract 6**
   |   |
|---|---|
| 15|   |
| 14|   |
| 13|   |
| 12|   |
Use strategies to find the sums. Circle any strategy you use.

5. 4 \hspace{1cm} \text{make a 10}
   \hspace{1cm} 3 \hspace{1cm} \text{doubles}
   \hspace{1cm} + 4 \hspace{1cm} \text{count on}

6. 3 \hspace{1cm} \text{make a 10}
   \hspace{1cm} 7 \hspace{1cm} \text{doubles}
   \hspace{1cm} + 5 \hspace{1cm} \text{count on}

Add. Write the sum.

7. 32 \hspace{1cm} + 14

8. 52 \hspace{1cm} + 46

9. 18 \hspace{1cm} + 21

10. 43 \hspace{1cm} + 35

Use your MathBoard and \( \bullet \). Make equal groups.
Complete the addition sentence.

<table>
<thead>
<tr>
<th>Number of Equal Groups</th>
<th>Number in Each Group</th>
<th>How many in all?</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. 3</td>
<td>2</td>
<td>____ + ____ + ____ = ____</td>
</tr>
<tr>
<td>12. 2</td>
<td>4</td>
<td>____ + ____ = ____</td>
</tr>
</tbody>
</table>

13. Choose the way to model the problem.
    James has 4 letters. He puts 2 stamps on each letter.
    How many stamps does he use in all?
    
    \( \circ \) 2 groups of 4 stamps \hspace{1cm} \( \circ \) 4 groups of 4 stamps
    \( \circ \) 2 groups of 2 stamps \hspace{1cm} \( \circ \) 4 groups of 2 stamps
Choose a Nonstandard Unit to Measure Length

Essential Question: How can you decide which nonstandard unit to use to measure the length of an object?

Model and Draw

Use scissors to measure short things.

Use a door to measure long things.

Share and Show

Use real objects. Circle the unit you would use to measure. Then measure.

<table>
<thead>
<tr>
<th>Object</th>
<th>Unit</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td>about ____</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td>about ____</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td>about ____</td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td>about ____</td>
</tr>
</tbody>
</table>

Math Talk: Alex measured a book with scissors. Then he measured with a door. Did he use more scissors or a door? Explain.
On Your Own

Use real objects. Choose a unit to measure the length. Circle it. Then measure.

<table>
<thead>
<tr>
<th>Object</th>
<th>Unit</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.</td>
<td></td>
<td>about ____</td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td>about ____</td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td>about ____</td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td>about ____</td>
</tr>
</tbody>
</table>

Problem Solving

9. Fred uses □ to measure the stick. Sue measures the stick and gets the same measurement. Circle the unit that Sue uses.

TAKE HOME ACTIVITY • Have your child measure something around the house by using small objects such as paper clips and then by using larger objects such as pencils. Discuss why the measurements differ.
Use a Non-Standard Ruler

Essential Question  How can you use a non-standard measuring tool to find length?

Model and Draw

About how long is the pencil?

The end of the pencil and the end of the must line up. Count how many from one end of the pencil to the other.

about ____

Share and Show

About how long is the string?

1. about ____

2. about ____

Math Talk  In Exercise 1, why must the end of the pencil and the end of the line up?
On Your Own

About how long is the string?

3. ___________ ________
   about _____  

4. ___________ ________
   about _____  

5. ___________ ________
   about _____  

Problem Solving

6. Wendy measures her pencil. She says it is about 2 long. Is she correct? Explain.

   ____________________________________________________________________
   ____________________________________________________________________

TAKE HOME ACTIVITY • Have your child use 20 paper clips to measure different small objects in your house. Be sure the paper clips touch end to end.
Compare Lengths

Essential Question: How can you compare lengths of objects?

Model and Draw

First, write 1, 2, and 3 to order the strings from shortest to longest.

Then measure with □.

1. — about □

2. — about □

3. — about □

Share and Show

Write 1, 2, and 3 to order the strings from shortest to longest. Then measure with □. Write the lengths.

1. _______ ____________

2. _______ ____________

3. _______ ____________

Math Talk: How can measuring with cubes tell you the order of the strings?
On Your Own

2. Write 1, 2, and 3 to order the strings from **shortest** to **longest**. Then measure with □. Write the lengths.

   ____________  about ___ □

   ____________  about ___ □

   ____________  about ___ □

3. Write 1, 2, and 3 to order the strings from **shortest** to **longest**. Then measure with □. Write the lengths.

   ____________  about ___ □

   ____________  about ___ □

   ____________  about ___ □

Problem Solving

4. Kate has these ribbons. Kate gives Hannah the longest one. Measure with □ and write the length of Hannah’s ribbon.

   about ____ □

TAKE HOME ACTIVITY • Give your child three strips of paper. Have your child cut them about 4 paper clips long, about 2 paper clips long, and about 5 paper clips long. Then have your child order the paper strips from shortest to longest.
Time to the Hour and Half Hour

Essential Question: How do you tell time to the hour and half hour on an analog clock?

Model and Draw

The hour hand and the minute hand show the time. Write the time shown on the clock.

4:00

4:30

Share and Show

Read the clock. Write the time.

1. 

2. 

3. 

Math Talk

Why does the hour hand point halfway between 5 and 6 at half past 5:00?
On Your Own

Read the clock. Write the time.

4. 

5. 

6. 

7. 

8. 

9. 

Draw and write to show the time.

10. Liam has soccer practice at half past 10:00.

TAKE HOME ACTIVITY • Say a time, such as half past 1:00 or 7:00. Ask your child where the clock hands will point at that time.
Use real objects. Choose a unit to measure the length. Then measure.

<table>
<thead>
<tr>
<th>Object</th>
<th>Unit</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td>about ____</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td>about ____</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td>about ____</td>
</tr>
</tbody>
</table>

How long is the yarn? Use the star ruler to measure.

4. ____ stars long

5. ____ stars long
Write 1, 2, and 3 to measure the strings from **shortest** to **longest**. Then measure with cubes. Write the lengths.

6. ____ _____ _____ cubes long
   ____ _____ _____ cubes long
   ____ _____ _____ cubes long
   ____ _____ _____ cubes long

7. ____ _____ _____ cubes long
   ____ _____ _____ cubes long
   ____ _____ _____ cubes long
   ____ _____ _____ cubes long

8. Read the clock. Choose the correct time.

   o 8:00
   o 8:30
   o 9:00
   o 9:30
Lesson 16

Use a Picture Graph

Essential Question How do you read a picture graph?

Model and Draw

Our Favorite Hot Dog Toppings

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>mustard</td>
<td><img src="image" alt="mustard" /></td>
</tr>
<tr>
<td>ketchup</td>
<td><img src="image" alt="ketchup" /></td>
</tr>
</tbody>
</table>

Each ![hot dog](image) stands for 1 child.

3 children chose ![mustard](image).

Most children chose ![ketchup](image).

2 fewer children chose ![mustard](image) than ![ketchup](image).

Share and Show

Our Sock Colors

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>black</td>
<td><img src="image" alt="black" /></td>
</tr>
<tr>
<td>white</td>
<td><img src="image" alt="white" /></td>
</tr>
<tr>
<td>blue</td>
<td><img src="image" alt="blue" /></td>
</tr>
</tbody>
</table>

Each ![sock](image) stands for 1 child.

Use the picture graph to answer the questions.

1. How many children are wearing ![black](image)? ____

2. What color of socks are most of the children wearing? _____

3. How many more children wear ![black](image) than ![white](image)? ____

Math Talk How did you find the answer to Exercise 3?
Our Weather

<table>
<thead>
<tr>
<th></th>
<th>rainy</th>
<th>sunny</th>
<th>cloudy</th>
</tr>
</thead>
<tbody>
<tr>
<td>☂️ ☂️</td>
<td>☀️ ☀️</td>
<td>☁️ ☁️</td>
<td></td>
</tr>
</tbody>
</table>

Each ⃝ stands for 1 day.

Use the picture graph to answer each question.

4. How many days in all are shown on the graph?
   ___ days

5. What was the weather for most days? Circle.

6. How many fewer days were ☂️ than ☀️?
   ___ days

7. How many ☀️ and ☁️ days were there?
   ___ days

8. Today is sunny. Robin puts one more ☀️ on the graph. How many ☀️ days are there now?
   ___ days

**Problem Solving**

**Real World**

**TAKE HOME ACTIVITY** - Help your child make a picture graph to show the eye color of 10 friends and family members.
Use a Bar Graph

Essential Question: How do you read a bar graph?

Fish in the Class Aquarium

<table>
<thead>
<tr>
<th>Fish</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>goldfish</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>guppy</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>angel fish</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

Number of Fish

0 1 2 3 4 5 6

To find how many, read the number below the end of the bar.

6 fish are 🐟.

Math Talk

How did you find the answer for Exercise 1?

Share and Show

Use the bar graph to answer the questions.

1. How many fish are in the aquarium?
   ____ fish

2. How many fish in the aquarium are 🐟?
   ____ fish

3. How many fewer fish are 🐟 than 🐟?
   ____ fish

4. Are more of the fish 🐟 or 🐟?
   _______

Getting Ready for Grade 2
On Your Own

Use the bar graph to answer the questions.

5. How many children chose potatoes? _____ children

6. How many children chose carrots? _____ children

7. Which vegetable did most children choose? Circle.

8. Which vegetables were chosen the same number of times? Circle.

Problem Solving

Use the bar graph to solve.

9. Brad and Glen both like corn the best. If the boys add this to the graph, how many children will have chosen corn? _____ children

TAKE HOME ACTIVITY • Ask your child to decide whether they prefer carrots or potatoes. Then have your child color to add their choice to the bar graph on this page.
Take a Survey

Essential Question: How can you take a survey?

Model and Draw

You can take a survey to get information. Jane took a survey of her friends’ favorite wild animals. The tally chart shows the results.

<table>
<thead>
<tr>
<th>Favorite Wild Animal</th>
<th>Tally</th>
</tr>
</thead>
<tbody>
<tr>
<td>elephant</td>
<td>⬜⬜⬜</td>
</tr>
<tr>
<td>monkey</td>
<td>⬜⬜⬜</td>
</tr>
<tr>
<td>tiger</td>
<td>⬜⬜</td>
</tr>
</tbody>
</table>

REMEmBER
Each tally mark stands for one friend’s choice.

Share and Show

1. Take a survey.
   Ask 10 classmates which wild animal is their favorite. Use tally marks to show their answers.

2. How many children did not choose tiger?
   _____________ children

3. Did more children choose elephant or tiger?
   _____________

4. The most children chose ___________ as their favorite.

Our Favorite Wild Animal

<table>
<thead>
<tr>
<th>Animal</th>
<th>Tally</th>
</tr>
</thead>
<tbody>
<tr>
<td>elephant</td>
<td></td>
</tr>
<tr>
<td>monkey</td>
<td></td>
</tr>
<tr>
<td>tiger</td>
<td></td>
</tr>
</tbody>
</table>

Math Talk: Describe a different survey that you could take. What would the choices be?
On Your Own

5. Take a survey. Ask 10 classmates which color is their favorite. Use tally marks to show their answers.

<table>
<thead>
<tr>
<th>Color</th>
<th>Tally</th>
</tr>
</thead>
<tbody>
<tr>
<td>red</td>
<td></td>
</tr>
<tr>
<td>blue</td>
<td></td>
</tr>
<tr>
<td>green</td>
<td></td>
</tr>
</tbody>
</table>

6. Which color was chosen by the fewest classmates? ________

7. Which color did the most classmates choose? ______________

8. Did more classmates choose red or green? __________

9. ___________ classmates chose a color that was not red.

10. Did fewer children choose blue or green? ____________

Problem Solving

II. Jeff wants to ask 10 classmates which snack is their favorite. He makes 1 tally mark for each child's answer. How many more classmates does he need to ask?

   ____ more classmates

TAKE HOME ACTIVITY • Have your child survey family members about their favorite sport and make a tally chart to show the results.
Identify Shapes

Essential Question: How can attributes help you identify a shape?

Model and Draw

The number of sides and vertices help you identify a shape.

- triangle: 3 sides, 3 vertices
- square: 4 sides, 4 vertices
- rectangle: 4 sides, 4 vertices
- trapezoid: 4 sides, 4 vertices
- hexagon: 6 sides, 6 vertices

Share and Show

Circle to answer the question. Write to name the shape.

1. Which shape has 4 sides?

2. Which shape has 3 vertices?

3. Which shape has 6 sides?

4. Which shape has 4 vertices?

Math Talk

How are a square and a rectangle alike?
Circle to answer the question. Write to name the shape.

<table>
<thead>
<tr>
<th>Question</th>
<th>Shape with 3 sides</th>
<th>Shape with 4 vertices</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.</td>
<td><img src="image1" alt="Triangle" /></td>
<td><img src="image2" alt="Triangle" /></td>
</tr>
<tr>
<td>6.</td>
<td><img src="image3" alt="Rectangle" /></td>
<td><img src="image4" alt="Rectangle" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Shape with 4 sides</th>
<th>Shape with 6 vertices</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.</td>
<td><img src="image5" alt="Octagon" /></td>
<td><img src="image6" alt="Hexagon" /></td>
</tr>
<tr>
<td>8.</td>
<td><img src="image7" alt="Square" /></td>
<td><img src="image6" alt="Hexagon" /></td>
</tr>
</tbody>
</table>

9. Jason, Mat, and Carrie each draw a shape with 4 sides. The shapes look different and have different names. Draw 3 shapes the children might have drawn. Write to name each shape.

- ![Triangle](image1)
- ![Octagon](image5)
- ![Square](image7)
Equal Shares

Essential Question: How can you name two or four equal shares?

Model and Draw

![Diagram showing two halves and four fourths]

Share and Show

Circle the shape that shows equal shares. Write to name the equal shares.

1. 

2. 

3. 

4. 

Math Talk: Are all equal shares the same size and shape? Explain.
Circle the shape that shows equal shares. Write to name the equal shares.

5. [Diagram: Two rectangles, one divided into two parts, the other divided into four parts]

6. [Diagram: A square divided into four parts, a circle divided into four parts]

7. [Diagram: A triangle, a circle divided into four parts]

8. [Diagram: Two rectangles, one divided into two parts, the other divided into four parts]

9. Riley wants to share his cracker with a friend. Draw to show two different ways Riley can cut the cracker into equal shares.

TAKE HOME ACTIVITY • Ask your child to help you cut a piece of toast into fourths.
Use the picture graph to answer Exercises 1 and 2.

<table>
<thead>
<tr>
<th>Our Favorite Fruit</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Apple" /> apple</td>
</tr>
<tr>
<td><img src="image" alt="Banana" /> banana</td>
</tr>
<tr>
<td><img src="image" alt="Orange" /> orange</td>
</tr>
</tbody>
</table>

Each person stands for 1 child.

1. How many children choose an orange? ____
2. Which fruit was chosen most often? ____________

Use the bar graph to answer Exercises 3 and 4.

<table>
<thead>
<tr>
<th>Our Favorite Pets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kind of Pet</td>
</tr>
<tr>
<td>dog</td>
</tr>
<tr>
<td>cat</td>
</tr>
<tr>
<td>bird</td>
</tr>
</tbody>
</table>

3. Which pet did most children choose? ____________
4. How many more children chose a cat than a bird? ____________
5. Take a survey. Ask 8 classmates which sport is their favorite. Use tally marks to show their answers.

Our Favorite Sport

<table>
<thead>
<tr>
<th>Sport</th>
<th>Tally</th>
</tr>
</thead>
<tbody>
<tr>
<td>baseball</td>
<td></td>
</tr>
<tr>
<td>football</td>
<td></td>
</tr>
<tr>
<td>soccer</td>
<td></td>
</tr>
</tbody>
</table>

6. Did more children choose baseball or soccer? __________

Circle to answer the question. Then write the shape name.

7. Which shape has 4 vertices?

[Diagram of shapes: triangle, square, hexagon]

8. Which shape shows fourths?

[Diagram of shapes: circle divided into fourths, rectangle divided into fourths]

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