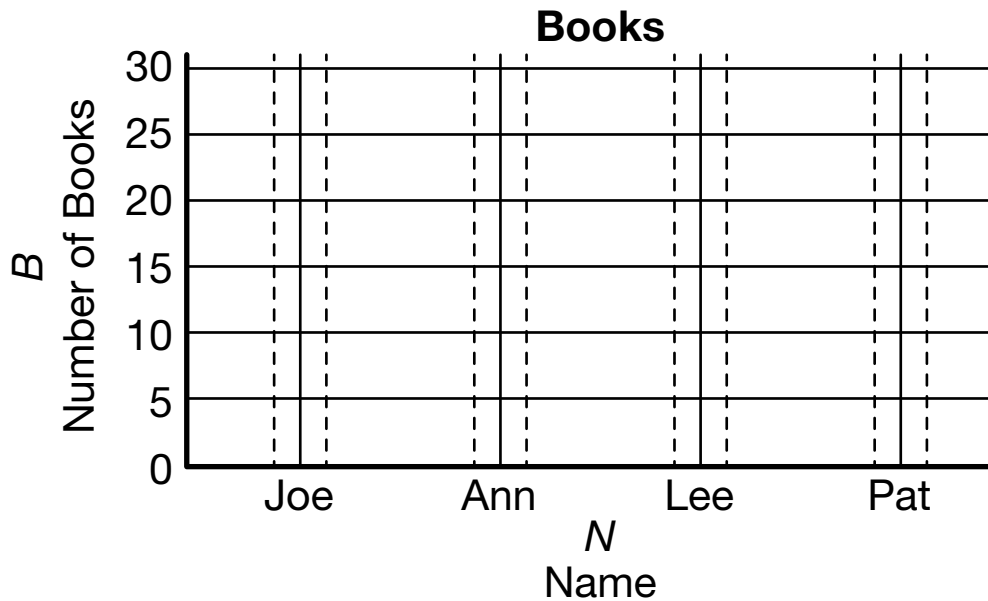# Midyear Test

Part 1 You will need a *200 Chart* and the *Addition Strategies Menu* in the *Student Activity Book* Reference section.

1. Make a bar graph of the number of books.

Books

N Name	B Number of Books
Joe	23
Ann	15
Lee	11
Pat	5

Books

2. How many more books does Ann have than Pat?

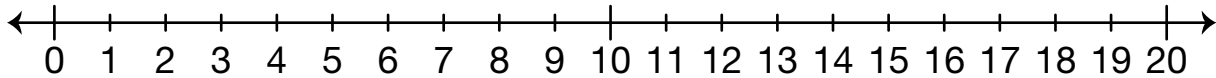Number sentence _____

3. How many more books does Ann have than Lee?
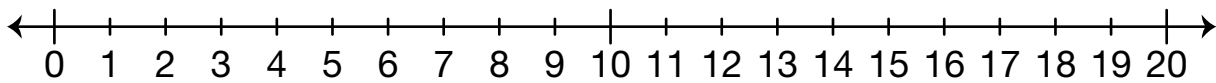
Number sentence _____

Show or tell how you solved the problem and write a number sentence. Remember to use labels.

4. Levi had 8 buttons. Diana gave him some more buttons. Now he has 15 buttons. How many buttons did Diana give him?
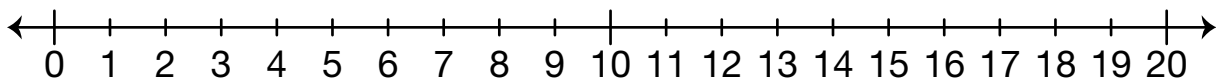
```
←|—|—|—|—|—|—|—|—|—|—|—|—|—|—|—|—|—|—|—|—|→
  0  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20
```

Number sentence _____

5. Sara had some tiles on her desk. Kim gave her 7 more tiles. Now she has 12 tiles. How many tiles did Sara have at the beginning?

```
←|—|—|—|—|—|—|—|—|—|—|—|—|—|—|—|—|—|—|—|—|→
  0  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20
```

Number sentence _____

6. Johnny has 12 coins. Nine of his coins are pennies and the rest are nickels. How many nickels does Johnny have?

```
←|—|—|—|—|—|—|—|—|—|—|—|—|—|—|—|—|—|—|—|—|→
  0  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20
```

Number sentence _____

Assessment Master

7. Show each number using base-ten shorthand and a number sentence.

	Number	Base-Ten Shorthand	Number Sentence
A.	216		
B.	321		
C.	46		
D.	153		

E. Write the numbers above in order from smallest to largest.

————————   ————————   ————————   ————————

8. Use the *200 Chart* answer the questions.

A. What number is 10 <u>more</u> than 86? ————————————

B. What number is 10 <u>less</u> than 145? ————————————

C. What number is 14 <u>more</u> than 82? ————————————

D. What number is 22 <u>less</u> than 74? ————————————

9. A base-ten hopper made one hop of 100, 8 hops of 10, and 12 hops of 1. Use the number line to show where he landed and write a number sentence.

Number sentence ————————————————————————

10. Show or tell how to use a mental math strategy to solve
$6 + 7 = \boxed{}$ two different ways.

One Way:

Another Way:

11. Show how to solve $48 + 36$ two different ways: using a
mental math strategy and a paper-and-pencil method.

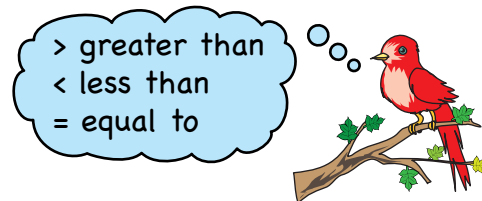Mental Math Strategy   Paper-and-Pencil Method

12. Compare these quantities. Use >, <, or =.

A. $6 + 7 \bigcirc 12 - 2$

B. $11 - 4 \bigcirc 4 + 3$

C. $9 + 3 \bigcirc 8 + 6$

D. $14 - 8 \bigcirc 12 - 6$

> greater than
< less than
= equal to

Part 2 You will need a centimeter and inch ruler, a *200 Chart,* and the *Addition Strategies Menu* in the *Student Activity Book* Reference section.

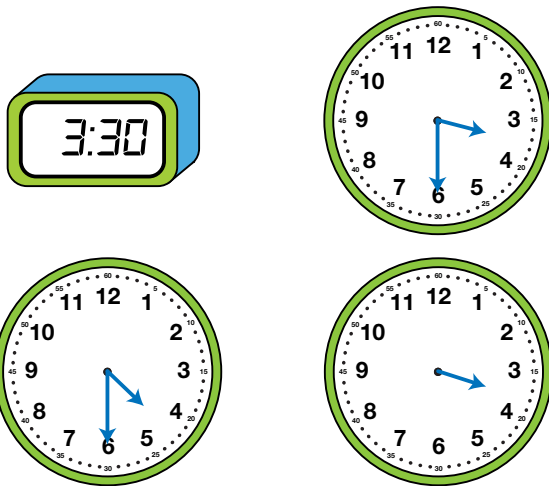**13.** List the number sentences in the fact family for 3, 5, and 8.

———————————————————— ————————————————————

———————————————————— ————————————————————

14. Is it true or false? Circle true or false for each problem.
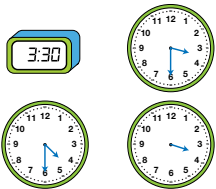
A. $415 = 100 + 40 + 5$	True	False
B. $126 = 12$ tens and 6 ones	True	False
C. $213 = 21 + 3$	True	False
D. $164 = 1$ hundred and 64 tens	True	False

15. A. Circle all the clocks that show 3:30 PM.

B. What could you be doing at 3:30 PM?

————————————————————————————————————

————————————————————————————————————

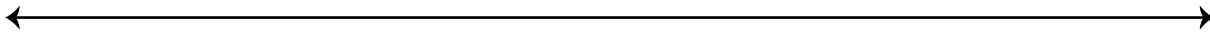**16.** What is the value of each set of coins? Include labels.

A.   _____

B.   _____
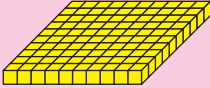
C.   _____

17. Show how to use a number line to solve 24 + 18. Write a number sentence.

Number sentence _____

18. Complete the chart.

Number	Hundreds	Tens	Ones	Number Sentence
145				
216				
307				

19. Use your ruler to measure the length of the pencil in centimeters and inches. Remember to label your measurements.

Measurement _____

Measurement _____

20. Peter measured the length of a marker. He measured it in both centimeters and inches. Circle the measurements that you think are reasonable.

5 inches or 13 centimeters   5 centimeters or 13 inches
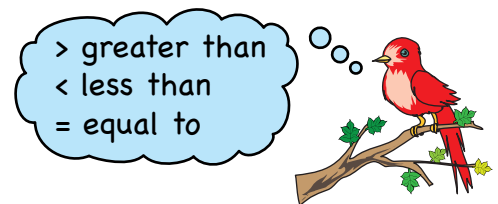
Show or tell how you decided.

_____

_____

21. Compare these quantities. Use >, <, or =.

A. 100 cm ◯ 100 inches

B. 5 meter ◯ 5 inches

C. 1 meter ◯ 5 cm

> greater than
< less than
= equal to

22. Circle true or false for each number sentence.

    A. $20 + 10 + 5 = 10 + 10 + 10 + 5$ True   False

    B. $20 + 20 + 5 = 10 + 10 + 10 + 5$ True   False

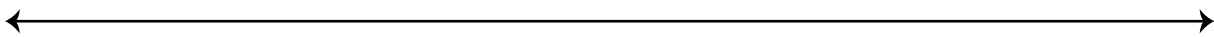   **C.** $10 + 10 + 10 + 10 + 4 = 20 + 4$ True   False

23. Solve the problem using a mental math strategy or paper-and-pencil method. Estimate to check if your answer is reasonable.

<u>Estimate</u>

$$\begin{array}{r} 49 \\ + 23 \\ \hline \end{array}$$

24. Show or tell how to solve $58 + 25$. Use the number line or explain how you would solve it on the 200 Chart.

<u>Number Line:</u>

⟵————————————————————⟶

<u>200 Chart:</u>

25. Moe solved the addition problem below.

Moe's Solution:

```
   76
+  19
  815
```

Estimate the sum and show or tell if Moe's answer is reasonable.

_____

_____

Use a mental math strategy or paper-and-pencil method to solve the problem.
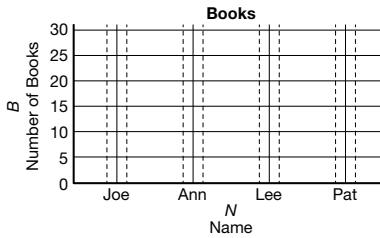
My Solution:

```
   76
+  19
```

Name _____ Date _____

Midyear Test

Part 1 You will need a *200 Chart* and the *Addition Strategies Menu* in the *Student Activity Book* Reference section.

1. Make a bar graph of the number of books.

Books

N Name	B Number of Books
Joe	23
Ann	15
Lee	11
Pat	5

Books

2. How many more books does Ann have than Pat?

Number sentence _____

3. How many more books does Ann have than Lee?

Number sentence _____

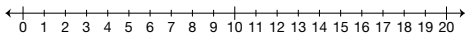Assessment Master   TG · Grade 2 · Unit 7 · Lesson 8 |
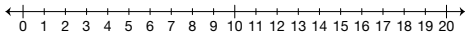
Teacher Guide - **Page 1**

Name _____ Date _____

Show or tell how you solved the problem and write a number sentence. Remember to use labels.

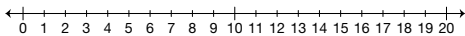4. Levi had 8 buttons. Diana gave him some more buttons. Now he has 15 buttons. How many buttons did Diana give him?

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Number sentence _____

5. Sara had some tiles on her desk. Kim gave her 7 more tiles. Now she has 12 tiles. How many tiles did Sara have at the beginning?

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Number sentence _____

6. Johnny has 12 coins. Nine of his coins are pennies and the rest are nickels. How many nickels does Johnny have?

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
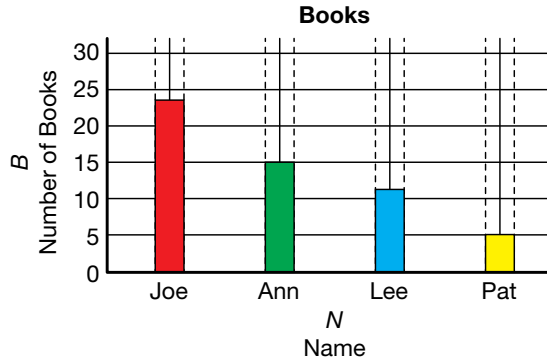
Number sentence _____

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Midyear Test (TG pp. 1–9)
Questions 1–25

1. Look to see that 23 is somewhere between 20 and 25. The bar for 11 books should be closer to 10 than 15. Approximations are sufficient.

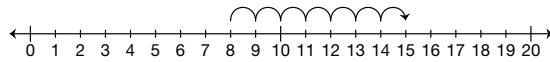2. 10 books; $15 - 5 = 10$

3. 4 books; $15 - 11 = 4$

For questions 4–6, strategies will vary. Possible strategies are shown.

4. 7 buttons; Possible strategy: I started at 8 and counted up to 15 on the number line.

   Number sentence:
   8 buttons + $\boxed{7}$ buttons = 15 buttons or
   15 buttons – 8 buttons = $\boxed{7}$ buttons

   0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

5. 5 tiles; Possible strategy: I started at 12 on the number line and counted back 7. She had 5 tiles at the beginning.

   Number sentence: $\boxed{5}$ tiles + 7 tiles = 12 tiles or 12 tiles – 7 tiles = $\boxed{5}$ tiles

   0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

6. 3 nickels; Possible strategy: I started at 9 and counted up 3 times to 12. My answer is 3 nickels.

   Number sentence:
   9 pennies + $\boxed{3}$ nickels = 12 coins or
   12 coins – 9 pennies = $\boxed{3}$ nickels

7. Possible responses:

	Number	Base-Ten Shorthand	Number Sentence
A.	216		$200 + 10 + 6 = 216$
B.	321		$300 + 20 + 1 = 312$
C.	46		$40 + 6 = 46$
D.	153		$100 + 50 + 3 = 153$

E. 46, 153, 216, 321

8. A. 96

B. 135

C. 96

D. 52

9. Possible response:
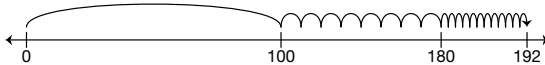
Number sentence: $100 + 80 + 12 = 192$

10. Strategies will vary. Possible mental math strategies are shown below:

One way: I used doubles. I know that $6 + 6 = 12$, so $6 + 7 = 13$.

Another way: I used the make ten strategy. The partner number for 7 to make ten is 3. I split 6 into $3 + 3$. $7 + 3 + 3 = 10 + 3$. $10 + 3 = 13$.

11. Strategies will vary. Possible strategies are shown below:

Mental Math Strategy

$$\begin{array}{r} 48 \\ + 36 \\ \hline 84 \end{array}$$

Pencil-and-Paper Method

$$\begin{array}{r} 48 \\ + 36 \\ \hline 70 \\ 14 \\ \hline 84 \end{array}$$

12. A. >

B. =

C. <

D. =

Name _____ Date _____

7. Show each number using base-ten shorthand and a number sentence.

	Number	Base-Ten Shorthand	Number Sentence
A.	216		
B.	321		
C.	46		
D.	153		

E. Write the numbers above in order from smallest to largest.

_____ _____ _____ _____

8. Use the *200 Chart* answer the questions.

A. What number is 10 <u>more</u> than 86? _____

B. What number is 10 <u>less</u> than 145? _____

C. What number is 14 <u>more</u> than 82? _____

D. What number is 22 <u>less</u> than 74? _____

9. A base-ten hopper made one hop of 100, 8 hops of 10, and 12 hops of 1. Use the number line to show where he landed and write a number sentence.

Number sentence _____

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Name _____ Date _____

10. Show or tell how to use a mental math strategy to solve $6 + 7 = \boxed{}$ two different ways.

<u>One Way</u>:

<u>Another Way</u>:

11. Show how to solve $48 + 36$ two different ways: using a mental math strategy a paper-andpencil method.

<u>Mental Math Strategy</u>　　　<u>Paper-and-Pencil Method</u>

12. Compare these quantities. Use >, <, or =.

A. $6 + 7$ ◯ $12 - 2$

B. $11 - 4$ ◯ $4 + 3$

C. $9 + 3$ ◯ $8 + 6$

D. $14 - 8$ ◯ $12 - 6$

> greater than
< less than
= equal to

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13. **A.** $3 + 5 = 8$

B. $5 + 3 = 8$

C. $8 - 3 = 5$

D. $8 - 5 = 3$

14. **A.** False

B. True

C. False

D. False
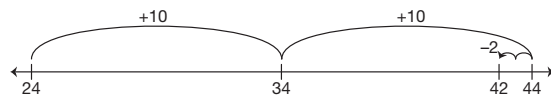
15. **A.**

B. Responses will vary. Possible response: I could be getting out of school and walking home.

16. **A.** 40¢

B. 44¢

C. 28¢

17. Responses may vary. Possible response:

Number sentence $24 + 18 = 42$

18.

Number	Hundreds	Tens	Ones	Number Sentence
145	1	4	5	$100 + 40 + 5 = 145$
216	2	1	6	$200 + 10 + 6 = 216$
307	3	0	7	$300 + 7 = 307$

19. 10 centimeters

4 inches

20. 5 inches or 13 centimeters; Answers will vary. Possible response: I know that inches are larger than centimeters, so the answer should be more centimeters than inches.

21. A. <

B. >

C. >

22. A. True

B. False

C. False

23. Responses will vary. Possible response using paper-and-pencil:

$$
\begin{array}{r}
49 \\
+\ 23 \\
\hline
12 \\
60 \\
\hline
72
\end{array}
\qquad
\begin{array}{r}
\underline{\text{Estimate}} \\
50 \\
+\ 20 \\
\hline
70
\end{array}
$$

Using mental math: I thought of money. 49 is close to 2 quarters and 23 is close to 1 quarter. 3 quarters is 75 cents. Then I took away 3 cents. $75 - 3 = 72$.
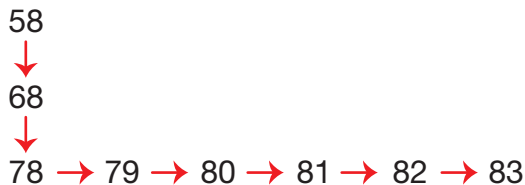
24. Responses may vary. Possible responses are shown.

Number Line:
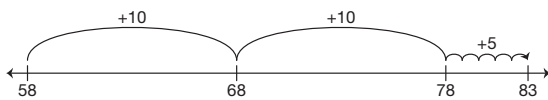
I started at 58 and made two hops of 10 and 5 hops of 1. I landed at 83.

200 Chart:

58
↓
68
↓
78 → 79 → 80 → 81 → 82 → 83

Name _____ Date _____

19. Use your ruler to measure the length of the pencil in centimeters and inches. Remember to label your measurements.

Measurement _____

Measurement _____

20. Peter measured the length of a marker. He measured it in both centimeters and inches. Circle the measurements that you think are reasonable.

5 inches or 13 centimeters   5 centimeters or 13 inches

Show or tell how you decided.

_____

_____

21. Compare these quantities. Use >, <, or =.

A. 100 cm ◯ 100 inches

B. 5 meter ◯ 5 inches

C. 1 meter ◯ 5 cm

> greater than
< less than
= equal to

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Name _____ Date _____

22. Circle true or false for each number sentence.

A. $20 + 10 + 5 = 10 + 10 + 10 + 5$ True   False

B. $20 + 20 + 5 = 10 + 10 + 10 + 5$ True   False

C. $10 + 10 + 10 + 10 + 4 = 20 + 4$ True   False

23. Solve the problem using a mental math strategy or paper-and-pencil method. Estimate to check if your answer is reasonable.

$$
\begin{array}{r}
49 \\
+\ 23 \\
\hline
\end{array}
\qquad \underline{\text{Estimate}}
$$

24. Show or tell how to solve $58 + 25$. Use the number line or explain how you would solve it on the 200 Chart.

Number Line:

200 Chart:

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Name _____ Date _____

25. Moe solved the addition problem below.

Moe's Solution:

$$76$$
$$+\ 19$$
$$\overline{815}$$

Estimate the sum and show or tell if Moe's answer is reasonable.

_____

_____

Use a mental math strategy or paper-and-pencil method to solve the problem.

My Solution:

$$76$$
$$+\ 19$$

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25. No. I estimated by using friendly numbers. I changed 19 to 20 and added $76 + 20 = 96$. Moe's answer is 815 and that's too far from 96.

Strategies will vary. Possible strategy using paper and pencil:

$$76 = 70 + 6$$
$$+\ 19 = 10 + 9$$
$$\overline{\qquad\ \ 80 + 15 = 95}$$

Possible strategy using mental math: 19 is one less than 20. 76 plus 2 tens is 96. Then I took one away to get 95.