

Mathematics!



A Story of Units! **Parent Handbook**

GRADE 1
MODULE 6

Grade 1 • Module 6

Place Value, Comparison, Addition and Subtraction of Numbers to 100

OVERVIEW

In this final module of the Grade 1 curriculum, students bring together their learning from Module 1 through Module 5 to learn the most challenging Grade 1 standards and celebrate their progress.

In Topic A, students grapple with comparative word problem types. While students have solved some comparative problem types during Module 3 and within the Application Problems in Module 5, this will be their first opportunity to name these types of problems and learn to represent comparisons using tape diagrams with two tapes.

Students extend their understanding of and skill with tens and ones to numbers to 100 in Topic B. For example, they mentally find 10 more, 10 less, 1 more, and 1 less and compare numbers using the symbols $>$, $=$, and $<$. They then count and write numbers to 120 using both standard numerals and the unit form.

In Topics C and D, students again extend their learning from Module 4 to the numbers to 100 to add and subtract. They add pairs of two-digit numbers in which the ones digits sometimes have a sum greater than 10, recording their work using various methods based on place value. In Topic D, students focus on using drawings, numbers, and words to solve, highlighting the role of place value, the properties of addition, and related facts.

At the start of the second half of Module 6, students are introduced to nickels and quarters, having already used pennies and dimes in the context of their work with numbers to 40 in Module 4. Students use their knowledge of tens and ones to explore decompositions of the values of coins. For example, they might represent 25 cents using 1 quarter, 25 pennies, 2 dimes and 1 nickel, or 1 dime and 15 pennies.

In Topic F, students really dig into problem solving and reasoning along with critiquing the reasoning of others. The topic includes the more challenging *compare with bigger or smaller unknown* word problem types wherein *more* or *less* suggest the incorrect operation, thus giving a context for more in-depth discussions and critiques. On the final day of this topic, students work with varied problem types, sharing and explaining their strategies and reasoning. Peers ask each other questions and defend their choices. The End-of-Module Assessment follows Topic F.

The module and year close with Topic G, wherein students celebrate their year's worth of learning with fun fluency festivities that equip them with games to maintain their fluency during the summer months prior to Grade 2. The final day is devoted to creating a math folder illustrating their learning in which to send home their year's work.

Terminology

New or Recently Introduced Terms

Comparison problem type

Dime

Nickel

Penny

Quarter

Familiar Terms and Symbols

$<$, $>$, $=$ (less than, greater than, equal to)

Suggested Tools and Representations

100-bead Rekenrek

Tape diagram

Lesson 1

Objective: Solve *compare with difference unknown* problem types.

Read the word problem.

Draw a tape diagram or double tape diagram and label.

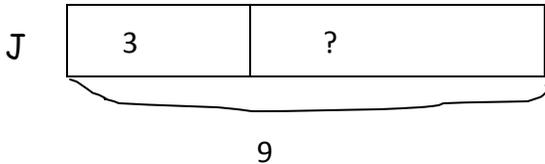
Write a number sentence and a statement that matches the story.

Peter has 3 goats living on his farm. Julio has 9 goats living on his farm. How many more goats does Julio have than Peter?



$$9 - 3 = \boxed{6}$$

or



$$3 + \boxed{6} = 9$$

Julio has 6 more goats than Peter.

Lesson 2

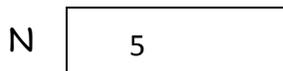
Objective: Solve *compare with bigger or smaller unknown* problem types.

Read the word problem.

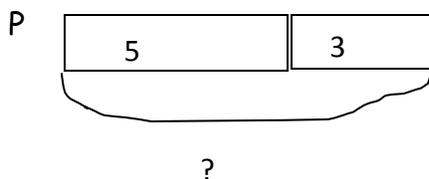
Draw a tape diagram or double tape diagram and label.

Write a number sentence and a statement that matches the story

Nikil baked 5 pies for the contest. Peter baked 3 more pies than Nikil. How many pies did Peter bake for the contest?



$$5 + 3 = \boxed{8}$$

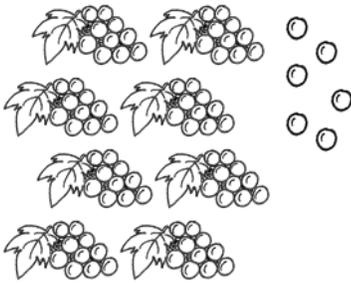


Peter baked 8 pies for the contest.

Lesson 3

Objective: Use the place value chart to record and name tens and ones within a two-digit number up to 100.

Write the tens and ones. Complete the statement



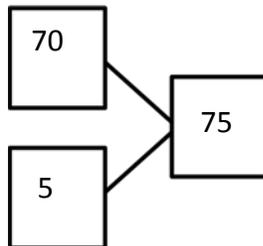
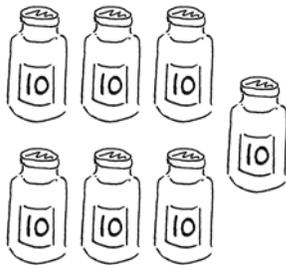
tens	ones
8	6

86 = 8 tens 6 ones

Lesson 4

Objective: Write and interpret two-digit numbers to 100 as addition sentences that combine tens and ones.

Count the objects and fill in the number bond or place value chart. Complete the sentences to add the tens and ones.

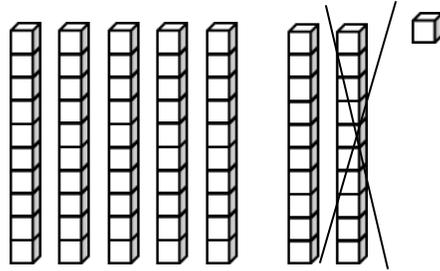


$75 = \underline{70} + \underline{5}$
5 more than 70 is 75.

Lesson 5

Objective: Identify 10 more, 10 less, 1 more, and 1 less than a two-digit number within 100.

Solve. You may draw or cross off (x) to show your work.



10 less than 71 is 61.

Lesson 6

Objective: Use the symbols $>$, $=$, and $<$ to compare quantities and numerals to 100.

Underline the correct words to make the sentence true. Use $>$, $<$, or $=$ and numbers to write a true statement.

36

is greater than
is less than
is equal to

6 tens 3 ones

36

$<$

63

Lesson 7

Objective: Count and write numbers to 120. Use Hide Zero cards to relate 0 to 20 to 100 to 120.

Circle the sequence that is incorrect. Rewrite it correctly on the line.

107, 108, 109, 110, 120

99, 100, 101, 102, 103

___107, 108, 109, 110, 111_____

Lesson 8

Objective: Count to 120 in unit form using only tens and ones. Represent numbers to 120 as tens and ones on the place value chart.

Write the number as tens and ones in the place value chart, or use the place value chart to write the number.

74

tens	ones
7	4

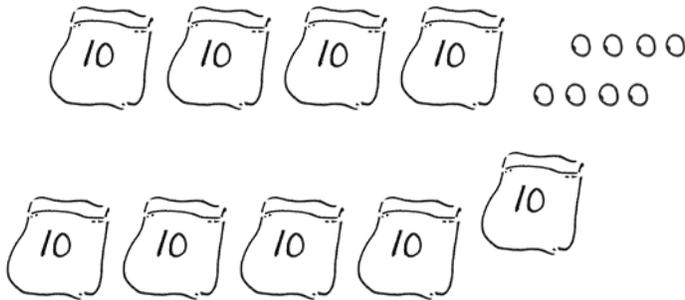
___109__

tens	ones
10	9

Lesson 9

Objective: Represent up to 120 objects with a written numeral.

Count the objects. Fill in the place value chart and write the number on the line.



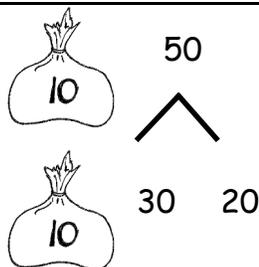
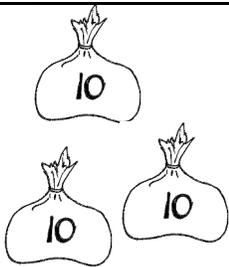
tens	ones
9	8

98

Lesson 10:

Objective: Add and subtract multiples of 10 from multiples of 10 to 100, including dimes.

1.



$$\underline{3} \text{ tens} + \underline{2} \text{ tens} = \underline{5} \text{ tens}$$

$$30 + 20 = \underline{50}$$

Lesson 11:

Objective: Add a multiple of 10 to any two-digit number within 100.

Solve.

$$\begin{array}{r} 47 + 40 = \underline{87} \\ \swarrow \searrow \\ 7 \quad 40 \end{array}$$

$$40 + 40 = 80$$

$$80 + 7 = 87$$

Lesson 12:

Objective: Add a pair of two-digit numbers when the ones digits have a sum less than or equal to 10.

Solve.

$$\begin{array}{r} 59 + 41 = \underline{100} \\ \swarrow \searrow \\ 1 \quad 40 \end{array}$$

$$59 + 1 = 60$$

$$60 + 40 = 100$$

$$\begin{array}{r} 57 + 22 = \underline{79} \\ \swarrow \searrow \\ 20 \quad 2 \end{array}$$

$$57 + 20 = 77$$

$$77 + 2 = 79$$

Lesson 13:

Objective: Add a pair of two-digit numbers when the ones digits have a sum greater than 10 using decomposition.

Solve and show your work.

$$\begin{array}{r} 36 + 47 = \underline{\quad 83 \quad} \\ \swarrow \quad \searrow \\ 33 \quad 3 \end{array}$$

$$47 + 3 = 50$$

$$50 + 33 = 83$$

$$\begin{array}{r} 57 + 34 = 91 \\ \swarrow \quad \searrow \\ 30 \quad 4 \end{array}$$

$$57 + 30 = 87$$

$$87 + 4 = 91$$

$$\begin{array}{r} \swarrow \quad \searrow \\ 3 \quad 1 \end{array}$$

Lesson 14:

Objective: Add a pair of two-digit numbers when the ones digits have a sum greater than 10 using decomposition.

Solve and show your work.

$$\begin{array}{r} 48 + 27 = \underline{\quad 75 \quad} \\ \swarrow \quad \searrow \\ 20 \quad 7 \end{array}$$

$$48 + 20 = 68$$

$$68 + 7 = 75$$

$$\begin{array}{r} \swarrow \quad \searrow \\ 2 \quad 5 \end{array}$$

$$\begin{array}{r} 48 + 22 = \underline{\quad 70 \quad} \\ \swarrow \quad \searrow \\ 2 \quad 20 \end{array}$$

$$48 + 2 = 50$$

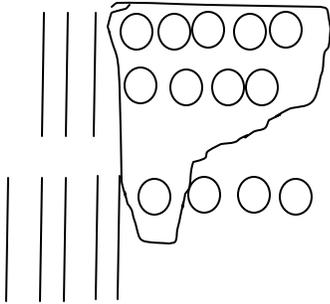
$$50 + 20 = 70$$

Lesson 15:

Objective: Add a pair of two-digit numbers when the ones digits have a sum greater than 10 with drawing. Record the total below.

Solve using quick tens and ones drawings. Remember to line up your tens with tens and your ones with ones. Write the total below your drawing.

$$39 + 54 = \underline{\quad 93 \quad}$$



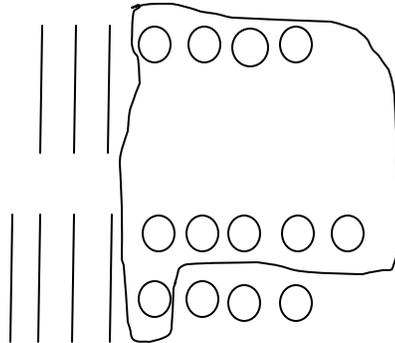
93

Lesson 16:

Objective: Add a pair of two-digit numbers when the ones digits have a sum greater than 10 with drawing. Record the new ten below.

Solve using quick tens and ones drawings. Remember to line up your drawings and rewrite the number sentence vertically.

$$34 + 49 = \underline{\quad 83 \quad}$$



$$\begin{array}{r} 34 \\ + 49 \\ \hline 1 \\ 83 \end{array}$$

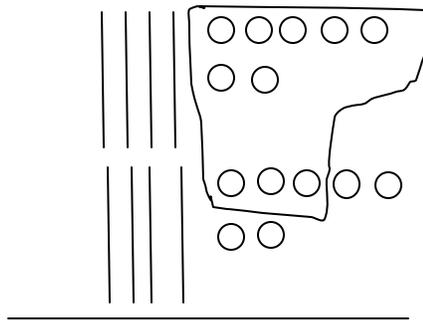
83

Lesson 17:

Objective: Add a pair of two-digit numbers when the ones digits have a sum greater than 10 with drawing. Record the new ten below.

Solve using quick tens and ones drawings. Remember to line up your tens and ones and re-write the number sentence vertically.

$$47 + 47 = \underline{\quad 94 \quad}$$



$$\begin{array}{r} 47 \\ + 47 \\ \hline 1 \\ 94 \end{array}$$

Lesson 18:

Objective: Add a pair of two-digit numbers with varied sums in the ones, and compare the results of different recording methods.

Use any method you prefer to solve the problems below.

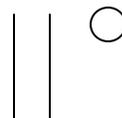
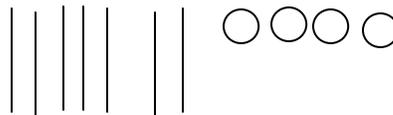
$$79 + 21 = \underline{\quad 100 \quad}$$

1 20

$$79 + 1 = 80$$

$$80 + 20 = 100$$

$$74 + 21 = \underline{\quad 95 \quad}$$



95

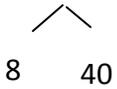
$$\begin{array}{r} 74 \\ + 21 \\ \hline 95 \end{array}$$

Lesson 19:

Objective: Solve and share strategies for adding two-digit numbers with varied sums.

Use the strategy you prefer to solve the problems below.

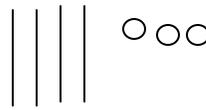
$$52 + 48 = \underline{100}$$



$$52 + 8 = 60$$

$$60 + 40 = 100$$

$$43 + 41 = \underline{84}$$



$$\begin{array}{r} 43 \\ + 41 \\ \hline \end{array}$$

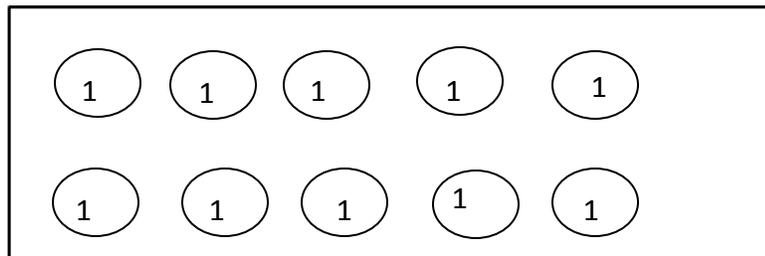
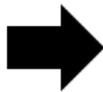
84

84

Lesson 20:

Objective: Identify pennies, nickels, and dimes by using their image, name, or value. Decompose the values of nickels and dimes using pennies and nickels.

Draw pennies to show the value of the coin.



Lesson 21:

Objective: Identify quarters by their image, name, or value. Decompose the value of a quarter using pennies, nickels, and dimes.

Match the coin combinations to the coin with the same value

Lesson 22:

Objective: Identify varied coins by their image, name, or value.

Solve. Match each statement to the coin that shows the value of the answer.

a. 5 pennies = 5 cents

b. 6 cents + 4 cents = 10 cents

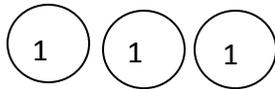
c. 1 quarter = 25 cents

d. 6 cents - 5 cents = 1 cent

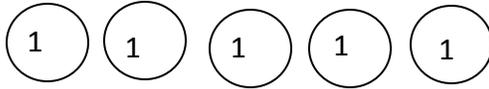
Lesson 23:

Objective: Count on using pennies from any single coin. Add pennies to show the written amount.

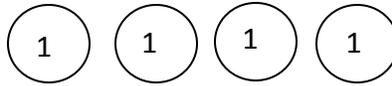
8 cents



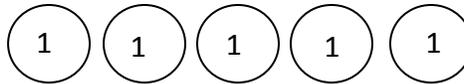
30 cents



10 cents



18 cents



Lesson 24:

Objective: Use dimes and pennies as representations of numbers to 120.

Find the value of each set of coins. Complete the place value chart to match.

Write an addition sentence to add the value of the dimes and the value of the pennies.



tens	ones
3	2

$$30 + 2 = 32$$

Lesson 25:

Objective: Solve *compare with bigger or smaller unknown* problem types.

Read the word problem.

Draw a tape diagram or double tape diagram and label.

Write a number sentence and a statement that matches the story.

Kiana wrote 3 poems. She wrote 7 fewer than her sister Emi. How many poems did Emi write?

K

3

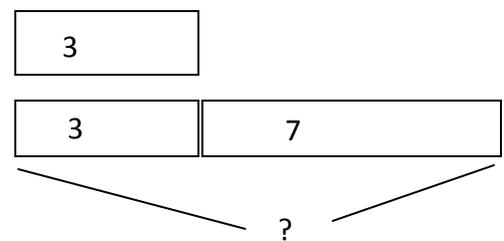
E

3	7
---	---

?

$3 + 7 = \boxed{10}$

Emi wrote 10 poems.



Lesson 26:

Objective: Solve *compare with bigger or smaller unknown* problem types.

Read the word problem.

Draw a tape diagram or double tape diagram and label.

Write a number sentence and a statement that matches the story.

Tony is reading a book with 16 pages. Maria is reading a book that has 10 pages. How much longer is Tony's book than Maria's book?

M

10

T

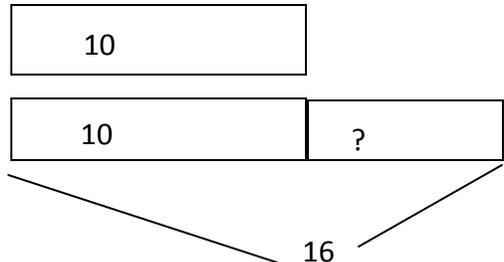
10	?
----	---

16

$10 + \boxed{6} = 16$

$16 - \boxed{6} = 10$

Tony's book is 6 pages longer than Maria's.



Lesson 27:

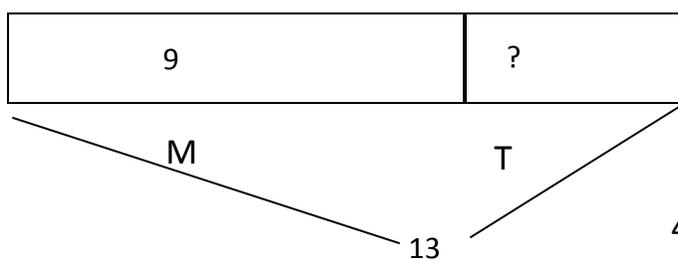
Objective: Share and critique peer strategies for solving problems of varied types.

Read the word problem.

Draw a tape diagram or double tape diagram and label.

Write a number sentence and a statement that matches the story.

Nine letters came in the mail on Monday. Some more letters were delivered on Tuesday. Then there were 13 letters. How many letters were delivered on Tuesday?



$$9 + 4 = 13$$

$$13 - 4 = 9$$

4 letters were delivered on Tuesday.

Lesson 28:

Objective: Celebrate progress in fluency with adding and subtracting within 10 (and 20).

Write the numbers from 91 to 120:

91	92	93	94	95	96	97	98	99	100
----	----	----	----	----	----	----	----	----	-----

101	102	103	104	105	106	107	108	109	110
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

111	112	113	114	115	116	117	118	119	120
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----