Conceptual Learning Materials

Insights into Math Concepts

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Sample K-1 Packet

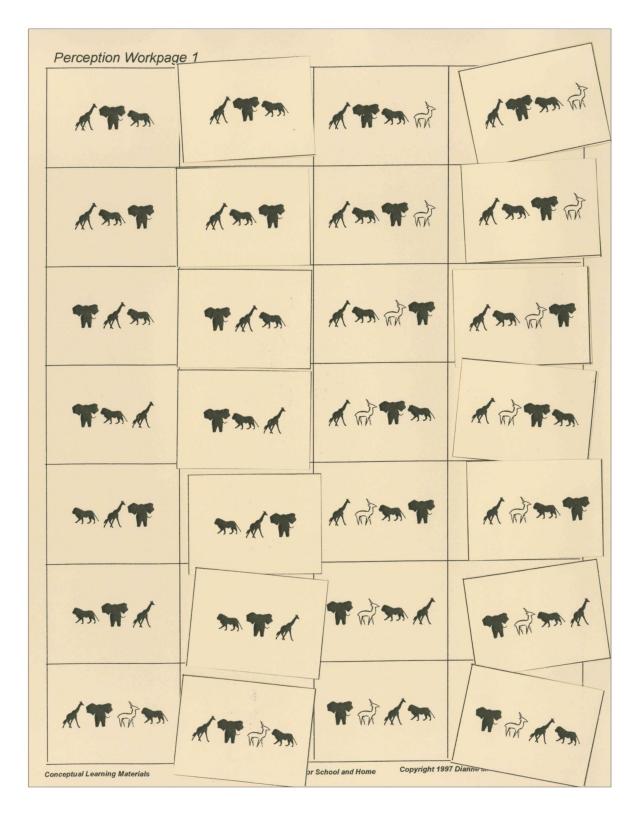
- 1. Picture of "Perception" exercise after completion
- 2. Instructions for Missing Numbers (manipulative & workpage)
- 3. *Sample of Missing Numbers manipulative exercise (for immediate child use)
- 4. *Sample Missing Number blackline of digital workpage (for immediate child use)
- 5. Golden Beads (manipulative matching exercises as well as free-response workpage)
- 6. Hundred Line Instructions
- 7. *Hundred Line Worksheet (for immediate child use)
- 8. Problem Solving A
- 9. *Mixed A (for immediate child use)
- 10. Time A
- 11. Thousand Line Instructions
- 12. *Thousand Line Worksheet (for immediate child use)
- 13. Order Blue
- 14. Place Value Match
- 15. *Place Value Workpage
- 16. *Numeration Blue & Pink (for immediate child use)
- 17. *Tens Gold (for immediate child use)
- 18. Exchange

*Actual free-response workpage

Insights into Math Concepts focuses on concepts rather than on drill and calculations that are readily available from most educational suppliers. Typically, any classroom has students with a wide range of abilities and skill levels, so the levels include work that is on-level, reinforcement, and advanced for the respective grades. For example, the scope and sequence chart shows that "Money A" would be challenging for Kindergarten, on-level for first grade, and reinforcement for second grade.

Note that the materials come in a variety of formats. All taskcards are available in colorful reusable cardstock, reproducible blackline masters, or more cost-effective digital downloads. Exercises that are manipulated come in colorful cardstock that is to be laminated and cut. Most are also available as a reproducible blackline workpage format and digital workpage downloads as well.

к	1	2	3	4	5	6	7	8	www.conceptuallearning.com
				1302 	Ĵ.				Perception
				01					Missing Numbers
								- 20.3	Patterns
		-538		100				180	Counting
			M		- 2		1.1	1.20	Golden Beads (blue)
									Golden Beads (pink)
				883 1	- 3			893	Golden Beads (green)
				255				2.555	Hundred Line & Labels
				120			1	20	Problem Solving A
									Mixed Practice A
									Money A
			1	20					Time A
				30	2		1	1.23	Thousand Line & Labels
									Order (blue)
					- 3			83	Order (pink)
				1				100	Order (green)
					, î			120	Place Value (blue)
									Place Value (pink)
				ŝ.,	2			2213	Place Value (green)
								150	Numeration (blue)
				33			1	1.2	More Numeration (pink)
									Tens (gold)
233					- 3		2	83	Exchange
245				20	0			2,55	Money B
					Ĩ			0.00	Time B
								200	Problem Solving B
1									Mixed Practice B



Perception Cardstock series of 10 separate exercises

- Exercises are printed on heavyweight cardstock. Lamination is recommended if heavy use is anticipated.
- The set consists of 10 workpages. These are printed on 8.5 by 11-inch stock.
- "Answers" are printed on a separate page. They have dotted lines outlining each picture and are designated by the workpage number on the lower right hand corner of each cut-out. Each answer page includes two sets of cut-outs.
- The child removes the cutouts from the envelope and superimposes "cutout" answer over "the empty space" next to their matching pictures.

Missing Numbers

Missing number exercises are available as a set of reusable multi-colored cardstock manipulatives which are laminated and cut as well as a set of reproducible blackline or digital download worksheets which are sold separately.

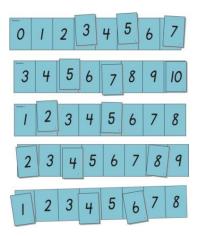
Instructions for cardstock manipulative version

Each page is printed on a bright-colored cover stock. We use five different colors for 10 exercises so the child will experience a sense of progression as the colors change (lunar blue for 1 & 6, pulsar pink for 2 & 7, orbit orange for 3 & 8, solar yellow for 4 & 9, and rocket red for 5 & 10). The final exercise deals with numbers up to 50.

1		3	4		6	7	8
famme 1	3		5	6	7		9
3	4		6		8	9	
0	T	2		4		6	
Present C	2	3	-	5		7	8
2	5	2	4	8	5	7	10
3	5	7	1	4	5		

the right. All the pieces for each exercise may be stored in the same envelope, or the strips can be organized in a rubber band and drawer organizer with the small rectangles placed in a hardware drawer or box. Labels for containers are included.

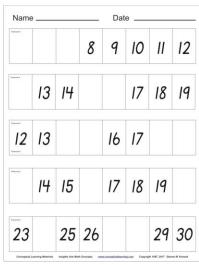
Laminate and cut each page into five strips and 14 to 16 small rectangles as shown on

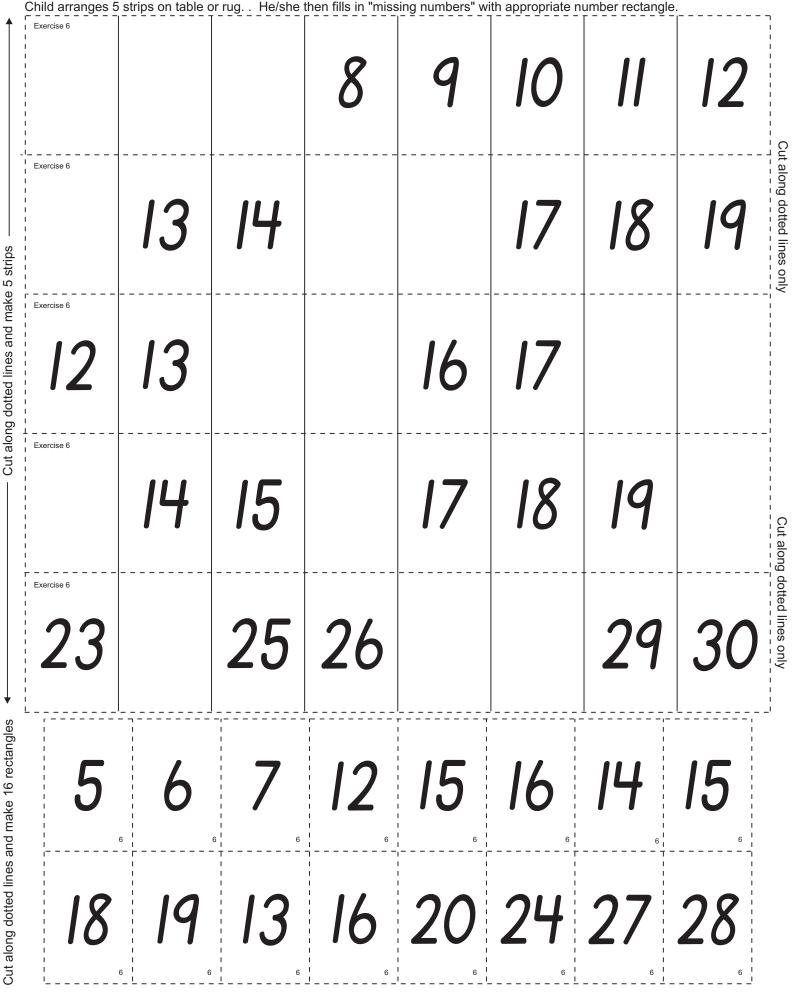


To do the exercise, the child uses the appropriate strips and corresponding numeral cutouts. He or she places the strips in any order on a rug or table. Then he or she searches for the appropriate numerals to place in the "blank" spaces. On successive days, the child choses the next exercise in the series until all ten are completed.

Instructions for blackline or digital download version

Print or reproduce a sheet for each child. Merely use as a free-response exercise by having the child write the missing numbers on his or her own copy.





Conceptual Learning Materials

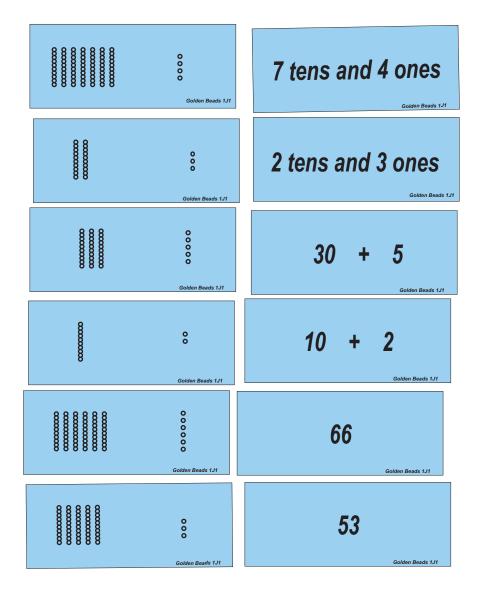
Name _____

Exercise 6	13	14			17	18	19
------------	----	----	--	--	----	----	----

Exe	ercise 6					
	12	13		16	17	
Exe	ercise 6					

Exercise 6	14	15	17	18	19	

Exercise 6					
23	25	26		29	30



Golden Bead Matching Cards

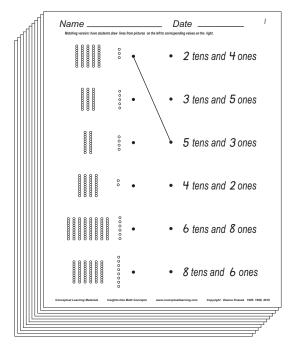
Golden beads are base-ten manipulatives made of beads rather than wooden blocks. All Golden Bead cardstock are six-problem matching exercises depicting baseten graphics, comparable to place value blocks. The first third of the set are place value words, the second third are expanded form, and the last third are numerals themselves. This particular set includes all three.

Each level includes ten exercises that require lamination and cutting.

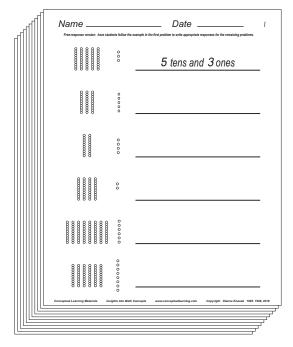
Reproducible blacklines and Digital Downloads

Both reproducible blackline masters and digital download versions of Golden Beads include worksheets involving two-, three-, and four-digit problems (blue, pink, and green). Half are matching, and the other half are free-response.

The first half of Golden Bead Blackline or Digital Download set involves drawing lines to the correct choice.



The second half of Golden Bead Blackline or Digital Download set is free response.



Hundred Line and Tags

Note: Child may use either the Montessori hundred chain or the red number line for number line exercises.

Contents

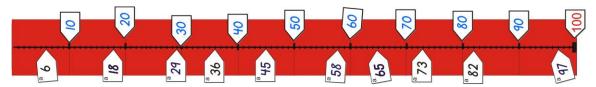
- 1. Instructions
- 2. Two pages of white tags (one to use and one for replacement of lost tags). Each "work" is labeled with the same lower case letter in the upper left-hand corner of the tag (a-h). Colored numerals illustrate how blue multiples of 10 and red hundred are used as guides.
- 3. One additional page of blue multiples of ten and red hundred.
- 4. Hundred line: three red pages to be cut into "tens". Ten sections are combined to make hundred line. (These are not needed if teacher opts to use hundred chain instead.)
- 5. Two pages of blank tags
- 6. Blank hundred board
- 7. Two pages of hundred board numerals with green units, blue multiples of ten, and red hundreds (one for cutting and one for spare parts)
- 8. Hundred board with black numerals for a student control
- 9. Extra blank hundred board to photocopy for written student extensions
- 10. Suggestions for hundred and thousand chain activities.

Preparation for hundred line and tags

- 1. Blank tags are separated until teacher or students are ready to write in values. They may be photocopied beforehand if desired.
- 2. One blank hundred board may be set aside as a master for individual student work. Lamination is optional.
- 3. Laminate all other cardstock materials.
- 4. Cut red line along dashed lines. Butt ten sections end-to-end and secure with packing tape from both front and back. Fold number line accordion-style and store in 12-inch organizer or zip bag.
- 5. Cut and store one set of blue tens and red hundred tags in separate hardware drawer, box, or zip bag for first presentation.
- 6. Cut and store another set with each of the sets of white tags (a-h) in separate hardware drawers, boxes, or zip bags. You will have one container with only colored multiples of ten and eight containers with a set of multiples of ten and black numerals with a letter. You may use the included adhesive label to identify the contents of each drawer or container.
- 7. Save remaining blue tags for replacement parts.

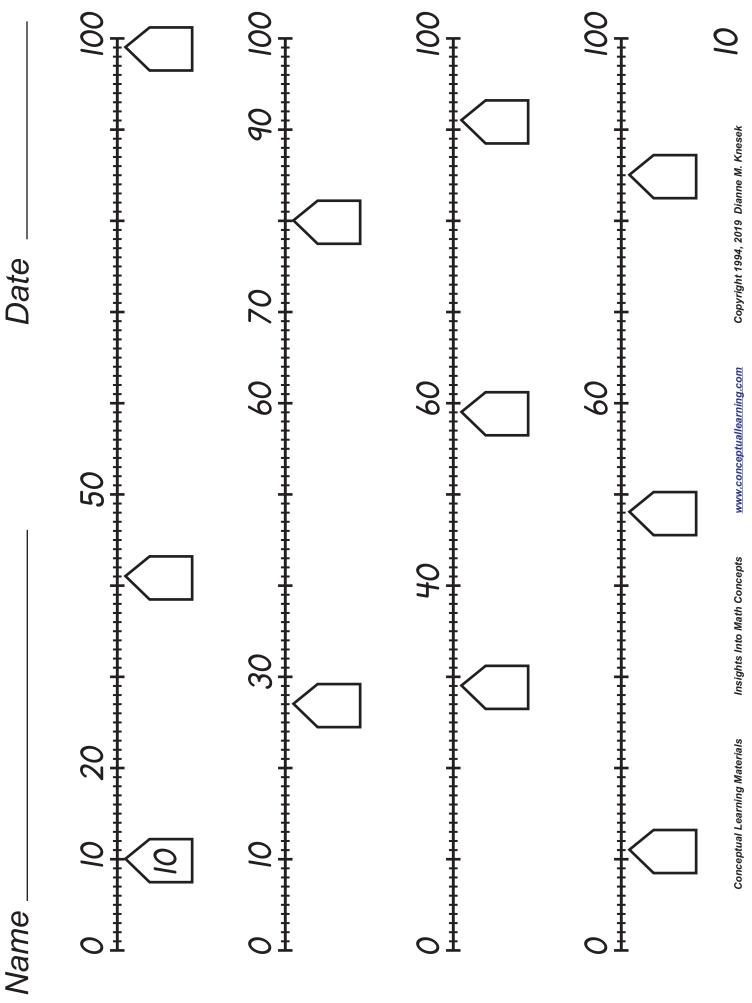
Instructions for hundred line and tags

- 1. In the first presentation guide the child in discovering that the hundred line consists of ten groups of ten. Have the child count by ones or by tens and place the blue tags along the top of the line as show below.
- 2. In the second session, the child places the blue tags along the top as in the first presentation, and puts the "a" tags along the bottom.
- 3. In subsequent lessons, the child progresses through drawers "b" through "h".



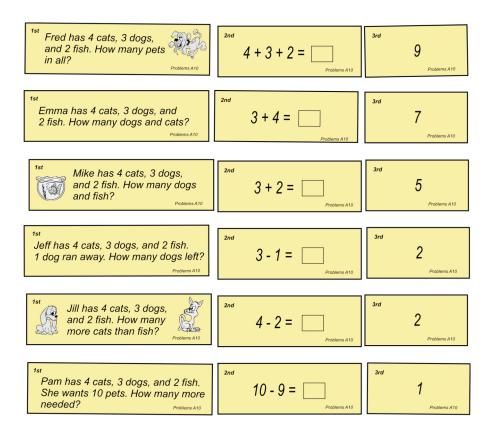
Hundred Board

- 1. Manipulative option: Laminate all versions of the board. Cut either of the pages with some colored numeral tiles and place in a drawer, box, or zip bag (Some teachers organize in several drawers such as 1-20, 21-40, etc.) Save the other page as a control. The child places the cutout tiles on the appropriate place on the blank board and checks with the control.
- 2. Workpage option: Use a blank page as a master for photocopying pages on which students may write. The child writes the numerals from 1 to 100 on his or her copy and uses the hundred board with all black numerals as a control. Teacher may devise numerous options for extensions such as evens, odds, and various multiples.



Date

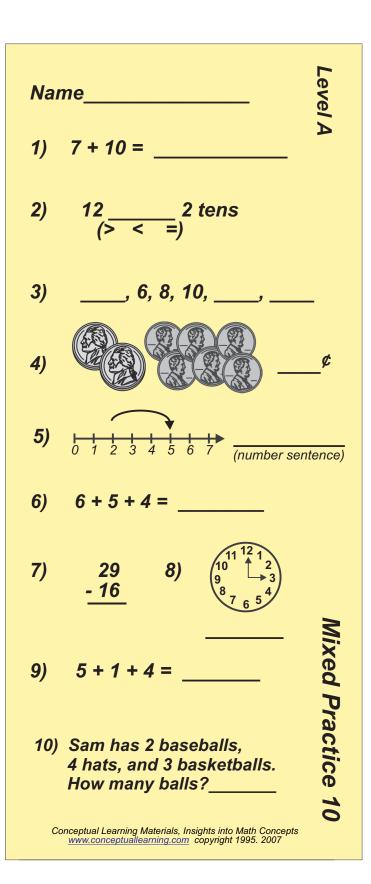
Problem Solving Matching cards are printed with black ink on colored cardstock. Each exercise consists of 6 matching exercises. The 1st card can be placed in any order, but the 2nd and 3rd "answer cards" must be placed with the appropriate question card. The entire set has 15 separate critical thinking exercises, each with six problems. Problem Solving Cards require lamination & cutting.



Problem Solving reproducible blackline masters and digital downloads have the same problems as the matching cards but come in a free-response format in which children record their own answers. Depending on your printer, it can be printed either in grayscale or color.

lame		Date		
^{1st} Fred has 4 cats, 3 dogs, and 2 fish. How many pets in all? Problems A10	2nd	4 + 3 + 2 =	^{3rd} 9	pets Problems A10
1st Emma has 4 cats, 3 dogs, and 2 fish. How many dogs and cats? Problems A10	2nd	Problems A10	3rd	Problems A10
1st Mike has 4 cats, 3 dogs, and 2 fish. How many dogs and fish?	2nd	Problems A10	3rd	Problems A10
^{1st} Jeff has 4 cats, 3 dogs, and 2 fish. 1 dog ran away. How many dogs left? _{Problems A10}	2nd	Problems A10	3rd	Problems A10
Jill has 4 cats, 3 dogs, and 2 fish. How many more cats than fish?	2nd	Problems A10	3rd	Problems A10
Pam has 4 cats, 3 dogs, and 2 fish. She wants 10 pets. How many more needed?	2nd	Problems A10	3rd	Problems A10
Insights Into Math Concepts www	v.conceptua	llearning.com Copyright 1994	Dianne M. Knesek	Problem WS A10

Mixed Practice A

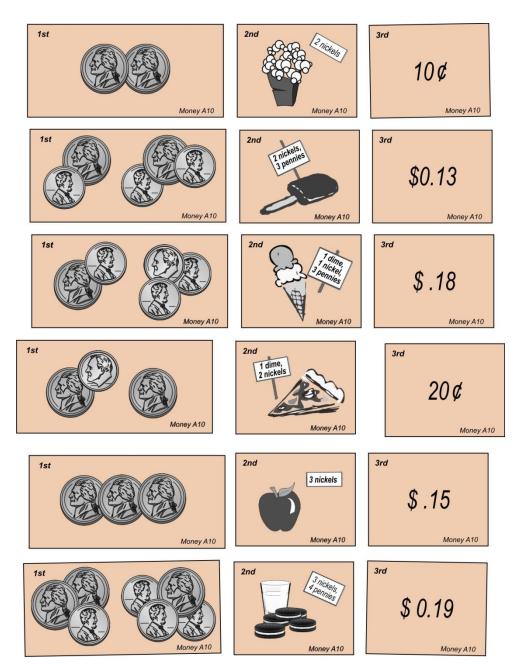


Mixed Practice A is a taskcard series that comes in reusable cardstock, reproducible blackline masters, and digital downloads.

Each page of the cardstock version has three taskcards printed in black ink on yellow cover stock. The reproducible blackline is also grayscale printed in black ink, while the digital download may be printed either in color or grayscale depending on the printer used.

The entire series has 15 different exercises encompassing all concepts through first grade.

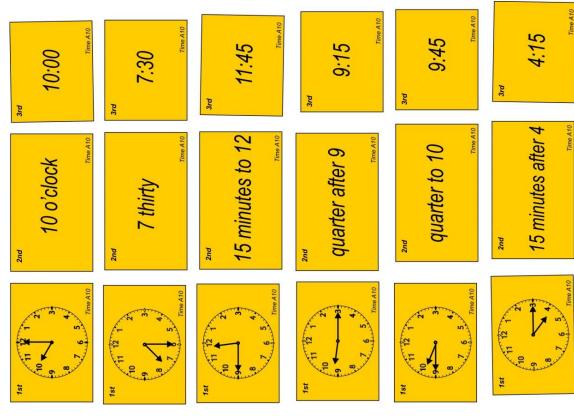
Money Match A, B, and C



Money Match A, B, and C are grade-appropriate three-way matching exercises printed on a full-size color cardstock page. Each fifteen-exercise set is gradually incremented in difficulty and covers all concepts appropriate for its respective level. Shown is level A which is printed in black ink on peach-colored cover stock. It focuses mainly on dimes, pennies, nickels, and a few bills. Early on it introduces all coins and goes on to evaluate the value of a combination of coins, different ways to compose the same value, simple change concepts, and some bills.

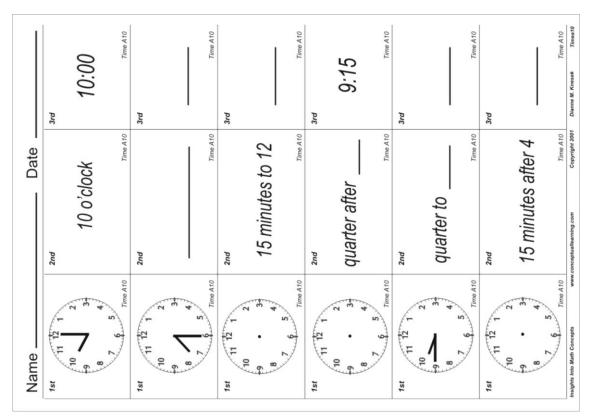
The cardstock matching version requires lamination and cutting. Also available is a reproducible free-response workpage version. Coming in fall of 2019 is a digital workpage version which may be printed either in grayscale or in color.

Time Matching Cards (A, B,and C)



Each cardstock Time matching card set has 10 exercises incremented in difficulty. Time A focuses on hour, half hour, and quarter hours. Each exercise is printed on a colorful full-page cover stock which requires lamination and cutting.

Time Blacklines and Digital PDFs (A, B, & C)



Time reproducible blackline masters and digital downloads are used to make free-response worksheets that correspond with their cardstock matching card counterparts.

Thousand Line and Tags

Note: Child may use either the Montessori thousand chain or the green number line for number line exercises.

Contents

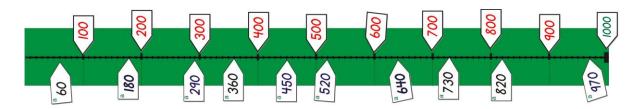
- 1. Instructions & adhesive organizational labels for hardware drawers or other storage containers
- 2. Two identical pages of white tags (one to use and one for replacement of lost tags). To assist in organizing exercises, each "work" is labeled with the same green lower case letter in the upper left-hand corner of the tag (a-h). Colored numerals illustrate how red multiples of 100 and the green 1000 are used as guides.
- 3. One additional page of red multiples of 100
- 4. One page of multiples of ten for optional use
- 5. Three green pages to be cut into "hundreds". Ten sections are combined to make thousand line.
- 6. Two identical pages of blank tags for extensions. These may be photocopied if the teacher wishes.
- 7. Two pages of numeral cards (Page 1 is an introduction and one's through fours, and Page 2 is five's through nine's.)
- 8. Grid for counting or for operations. This may be photocopied for children to write on their own copies as desired.

Preparation

- 1. Reproducible blank tags and operations grid are separated until ready for use.
- 2. Laminate all other cardstock materials.
- 3. Cut green number lines along dashed lines. Butt ten sections end-to-end and secure with packing tape from both front and back. Fold number line accordion-style and store in 12-inch organizer or zip bag.
- 4. Cut and store one set of red tags in separate hardware drawer, box, or zip bag for first presentation.
- 5. Cut and store another set of red tags along with each of the sets of white labels (a-h) in separate hardware drawers, boxes, or zip bags. Save remaining red tags for replacement parts.
- 6. Cut optional set of blue ten tags if desired. A set may be stored in each container, or they may be stored separately for occasional use.

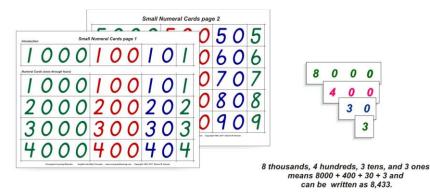
Instructions for use

- 1. In the first presentation, guide the child in discovering that a hundred consists of ten groups of ten and the entire thousand line consists of ten groups of a hundred. Have the child count by hundreds and place the red tags along the top of the line as show below. For a more detailed lesson, the child may place a set of "tens" in the first hundred section or in all hundred sections.
- 2. In the second session, the child places the red tags along the top as in the first presentation, and puts the "a" labels along the bottom.
- 3. In subsequent lessons, the child progresses through drawers "b" through "h".



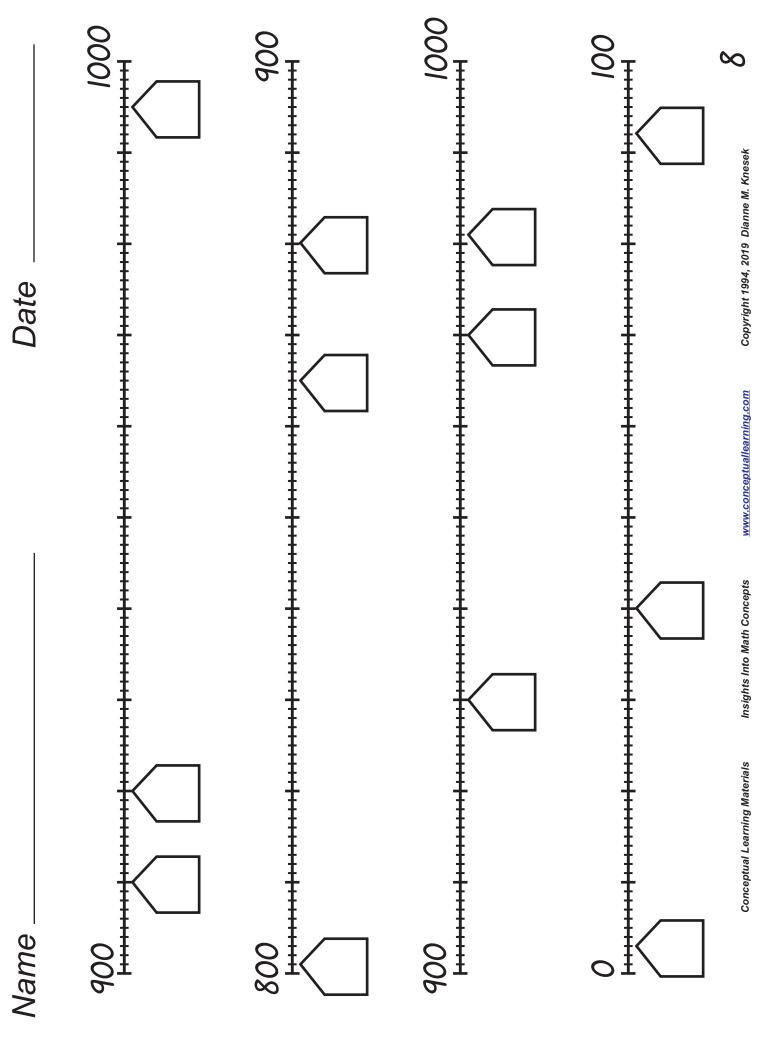
Numeral Cards

- 1. Also included are two pages of numeral cards. These are to be laminated and cut. If desired, the top portion of Page 1 (the first 1000, 100, 10, and 1) may be used as a separate introductory lesson; otherwise, save these for replacement parts.
- 2. The cut 1000's, 100's, 10's, and 1's may be stacked according to size and secured with a rubber band or placed in a slotted seat chart.
- 3. To use, the child organizes the cards on a table or rug. The appropriate cards may be used to compose numbers as shown.

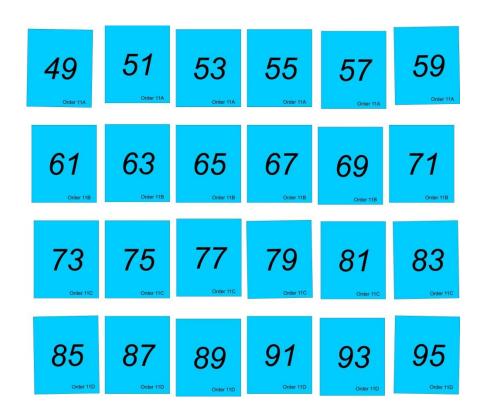


Operations Grid

Also included is a reproducible grid that can be used for counting exercises or operations.



Order Blue, Pink, and Green



Cardstock version

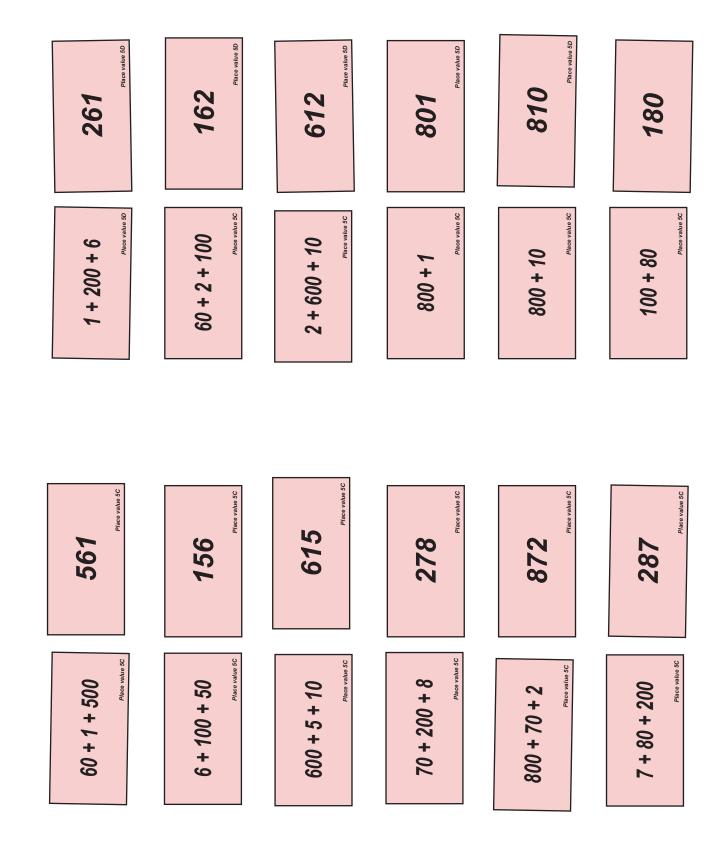
Order denotes a sequencing exercise of various types. Order Blue sequences two-digit numerals, while Order Pink sequences three-digit and Order Green sequences four-digit numerals. Each exercise is four sequences of six values. The cardstock manipulative version is printed on a full page which is then laminated and cut. Most series include 10 separate exercises, but Order Blue is comprised of 15 exercises to also allow work with even and odd numerals.

Reproducible Blackline or Digital PDF Download

Blackline and digital versions are reproducible free-response worksheets that correspond to the cardstock counterparts.

Name			Date		
	51		55	57	59
Order Blue 11A	Order Blue 11A	Order Blue 11A	Order Blue 11A	Order Blue 11A	Order Blue 11A
61		65	67	69	
Order Blue 11B	Order Blue 11B	Order Blue 11B	Order Blue 11B	Order Blue 11B	Order Blue 11B
Order Blue 11C	75 Order Blue 11C	Order Blue 11C	79 Order Blue 11C	Order Blue 11C	83 Order Blue 11C
85	87	89			
Order Blue 11D	Order Blue 11D	Order Blue 11D	Order Blue 11D	Order Blue 11D	Order Blue 11D

Place Value Match (Blue, Pink, and Green)



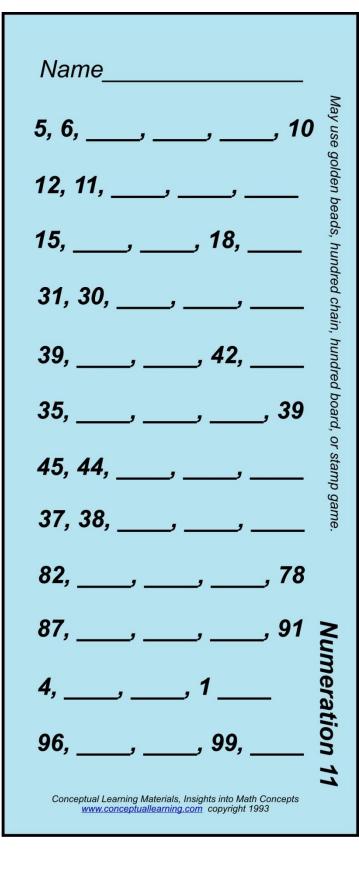
Name	Dat	fe	Pink PV 5C		
	60 + 1 + 500	561			
	6 + 100 + 50	· · · · · · · · · · · · · · · · · · ·			
	600 + 5 + 10	· · · · · · · · · · · · · · · · · · ·			
	70 + 200 + 8	· · · · · · · · · · · · · · · · · · ·			
	800 + 70 + 2	· · · · · · · · · · · · · · · · · · ·			
	7 + 80 + 200				
	1 + 200 + 60				
	60 + 2 + 100				
	2 + 600 + 10	· · · · · · · · · · · · · · · · · · ·			
	800 + 1	· · · · · · · · · · · · · · · · · · ·			
	800 + 10	· · · · · · · · · · · · · · · · · · ·			
	100 + 80	· · · · · · · · · · · · · · · · · · ·			

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Blue Numeration (2-digit) Exercise 11 out of 18

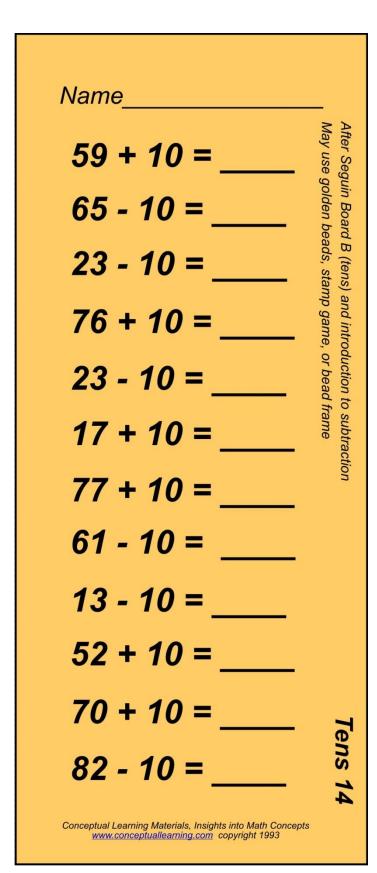
Pink Numeration (3-digit)

Exercise 5 out of 15

Name		
>, <, or =		May use
500 + 20 + 3 >	> 521	golden b
300 + 60	306	eads or s
800 + 5	850	May use golden beads or stamp game
691 600	+ 90 + 10	ne.
600 + 30 + 2	600 + 20 ·	+ 3
400 + 3 +60	400 + 60 +	. 3
506 50	00 + 60	_
300+40+7	20 +1+400	More
600 + 0 + 5	600 + 50	
10 tens	110	Numeration 5
10 hundreds	1000	on 5

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Tens "Gold"



Tens Gold

Children learn that tens are "magic' and can make all operations easier. The 30-exercise set features place value applications, calculations by making tens, and as addends and subtrahends in two- and three-digit problems. The set also explores patterns, multiples of ten and rounding.

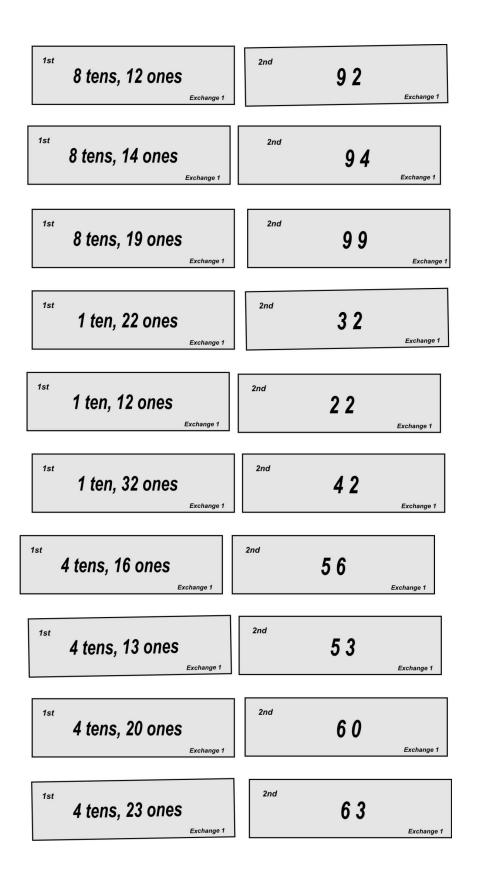
As is the case with all taskcard sets, Tens is available as reproducible cardstock taskcards, reproducible blackline masters, or digital PDF downloads.

Programs

Tens was originally designed for use with Montessori didactic materials, has also been embraced by traditional programs – either whole group or individualized.

Exchange

Exercise 1 of 10



"Exchange" Matching Cards

Each Exchange exercise is printed on a full page. It entails matching regrouped values with the original. The purpose is to prepare the child for any operation in which regrouping is required.

Normally, it is introduced with place value blocks or other hands-on place value materials, but the child is soon able to abstract the process. The last several exercises are three-part matching exercises that introduce the notation normally used when regrouping two- and three-digit addition and subtraction problems.

Exchange is available only as a cardstock matching exercise. Cardstock manipulatives require lamination and cutting.