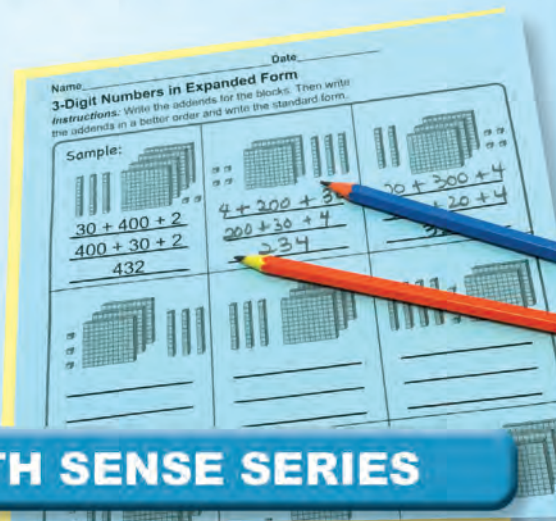
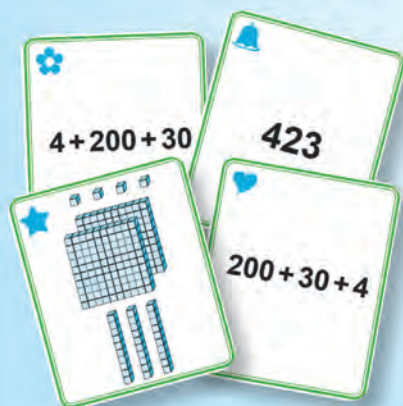


Help kids make sense of math with versatile activities and FUN games. Here's a preview!

Set of 40 Math Cards

WITH Games Guide

# 3-Digit Numbers in Expanded Form



PRIMARY MATH SENSE SERIES

## INCLUDES

- Set of 40 Math Cards
- Recording Worksheets & Answers
- Exit Tickets
- Instructions for 4 Games
- Card Management Tips

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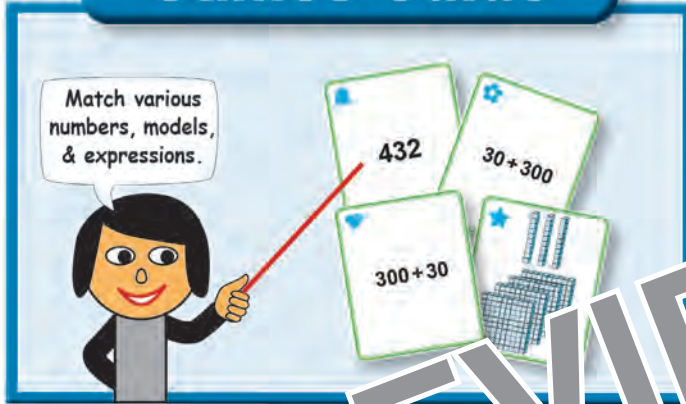
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 Written and Illustrated by Angie Seltzer.

PREVIEW  
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The first section is the Games Guide, with instructions for versatile card activities.

## Games Guide



### Activities

**Matching** For each activity in this guide, you'll need math cards. Each card can be matched in multiple ways! More sets are included in this document. More sets are available separately for grades 5 to 15, or Kindergarten through Grade 1.

**Variety of Uses** With these cards, students of mixed languages can help each other improve their fluency with math and models during fun games. The cards can be used in many activities by individual students, pairs, or small groups.

#### About the Suits and Values

Cards are labeled with suits (stars, hearts, flowers, and diamonds). In each multi-match set, there are nine different matching groups of four cards for each. Many sets include numbers, expressions, and models. During games, any two of the four matching cards can be paired with each other as a "match." Each card set also contains four wild cards to use in certain games.

#### General Preparation for Any Card Set

**Copy and Store the Cards** Make one copy for each group of students or for a math center. (Either card stock or plain paper can be used.) Cut apart the cards. Store the cards in small bags or envelopes marked with the titles, or print the folding storage that comes with each set of cards.

**Copy Supplemental Pages** Each set comes with exit tickets that can be printed in either color or gray scale, plus two recording worksheets.

#### Sorting & Matching

**Setup** Start with either the whole deck, except wild cards, or separate the deck into two partial decks. Shuffle the cards for the students to match. Make copies of the related recording worksheet for each student.

**Instructions** Have students work individually or in pairs. They should first separate the star cards from the other cards.



Then have students sort the recording cards and match them to the star cards. Remind students that each star card matches one card from each of the four suits. After cards are sorted, have students complete the recording sheet.

**ANSWERS**

**3-Digit Numbers in Expanded Form**

Use the answers for the tables. Then write the number and write the expanded form.

$30 + 400 + 2$ $400 + 30 + 2$ 432	$30 + 300$ $300 + 30$ 330	$20 + 300 + 4$ $300 + 20 + 4$ 324
$30 + 400 + 2$ $400 + 30 + 2$ 432	$30 + 300$ $300 + 30$ 330	$20 + 300 + 4$ $300 + 20 + 4$ 324
$30 + 400 + 2$ $400 + 30 + 2$ 432	$30 + 300$ $300 + 30$ 330	$20 + 300 + 4$ $300 + 20 + 4$ 324

These recording worksheets are from 3-Digit Numbers in Expanded Form.

There is a handy instruction sheet for each of four fun, engaging card games.

## PAIRS CHALLENGE

### Pairs Challenge Card Game

Players 2-3

Time 5-15 minutes

**Object** Find pairs (1 point) or triples (3 points). Earn the most points from matches.

**Setup** Place all 36 cards face down, without the wild cards, in the center of a table. Spread out the pile so students can choose cards at random.

**Instructions** Have players take turns choosing cards from the pile and placing them face up in front of themselves, until each player has six cards. Then players look at their cards to identify any matching cards based on values or models only, not suits.

- ▶ Each matching pair is worth 1 point.
- ▶ Each set of three matching cards is worth 3 points.
- ▶ Each set of four matching cards is worth 4 points.

Players mark down the cards from that round in their score sheet.

Continue with another round. After the third round, there are 12 cards left in the center. Play three rounds of 12 cards to play three rounds of 12 cards.



The score for a pair is 1 point.



The score for 3 cards that match is 3 points.

## CRAZY MATCH

### Crazy Match Card Game

This game is similar to *Crazy 8s* or *UNO*. You may want an adult or older student to assist with this game.

Players 2-4 (Use a double set if there are 3-4 players.)

Time 20-30 minutes

**Object** Be the first to run out of cards.

**Setup** Shuffle the cards including all four wild cards. Deal seven cards to each player. (Use two identical sets if more than two students are playing.) Turn up one card for the Discard pile. Place the rest in a Draw pile, face down.



This game requires the wild cards.



Player 1



Draw & Discard Piles



Player 2

**Instructions** Each player, in turn, draws a card from his or her hand to match the top card of the Discard pile. The player who cannot draw a card that matches the top card of the Discard pile must draw a card from the Draw pile. If a player has no cards to play, they must draw a wild card from the Draw pile. The player who cannot draw a wild card to match the top card of the Discard pile must draw a card from the Draw pile. The player who runs out of cards wins.

**What if a player runs out?** There are two options. The first option is to let the player draw a card from the Draw pile. The second option is to let the player draw a card from the Discard pile and use it to match the top card of the Discard pile.

**What if students disagree?** Whether cards match, they can discuss the cards.



Either of these two cards can be played on the Discard pile above. The left card matches the suit and the other matches the value.

## CONCENTRATION

### Concentration Card Game

Players 2-4 Time: 15-30 minutes

**Object** Match the most pairs of cards.

**Setup** This game requires four or five groups of four matching cards and no wild cards. Randomly place the cards face down in an array of four rows of four. (You may want to separate the 36-card deck into two partial decks, for two groups of students to play.)

**Instructions** Players take turns. Each player turns up two cards, states the value or model on each card, and decides if the cards match. Two cards of the same suit do NOT count as a match. If the cards match, the player picks up and saves the two cards and the turn ends. If they do not match, the player turns the cards back over. The next player then takes a turn. Play goes on until all cards are picked up. The player with the most pairs wins.



Players who turn up two cards that match can remove them from the array.

### Variations

**Easier** Start with just three groups of four matching cards. Shuffle these 12 cards and place them face down in an array.

**More Challenging** Start with nine cards from just two of the suits, such as the star and bell cards.

**Most Challenging** Start with all 36 cards.

## MAKE A WISH

### Make a Wish Solitaire Card Game

You may want an adult or older student to monitor this game and help any student who has difficulty finding pairs.

Players 1

Time 15-30 minutes

**Object** Pick up two matching cards at a time. Try to remove all cards without getting stuck.

**Setup** Start with either four or five groups of four matching cards. Shuffle the cards and make piles of four cards, face up. (Omit wild cards.)

**Instructions** The player looks at the top cards on the piles. If two cards match, the player picks up those cards and stacks them to the side. This will reveal two new cards. Now, the player looks again for a matching pair and picks them up. The player continues looking for matching pairs and picking them up. When there are no visible matching pairs, the game is over. But, if the player continues until all stacks have been cleared, the player wins! If there are no matching pairs, you may want to allow students to move one or more cards from one stack to another or into empty piles. Although this round would not count as a win, students may enjoy finding all of matches.



This example has three matching cards but only two should be removed. The third card will match another card lower down in a pile.

### Variations

**Easier** Have two students play together, taking turns picking up pairs of cards that match. Encourage students to help each other by giving hints.

**More Challenging** Start with all 36 cards as nine stacks of four cards.

The guide also comes with suggestions for using exit tickets and a bulletin board.

Using Exit Tickets

with four customized exit tickets, one for each game played with the cards. These should not be used with students so they can reflect on the game or activity and with the name of the game and the card set. This information will help you track the use of games.



The Exit Tickets for each set are on the page following the printable cards.

**Preparation** Print one exit ticket for each set. If students are using one of the games, make copies of the relevant print. Give one copy to each student.

**Completing the Tickets** Students should complete the two sentences to reflect on what they learned and what they liked about the game. Their responses can provide insights into their understanding of the math concepts. You may want to save these tickets as evidence of the effectiveness of the activities.

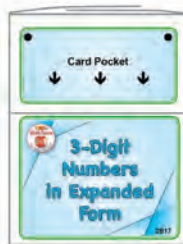
**Card Storage Pockets** Print, fold, and mount pockets for the featured set of cards plus extra pockets for returned cards. Place the cards in the appropriate pockets. If you have laminated the cards, you may need to adjust the size or print a second pocket.

Matching the Cards

Point out that the cards are labeled with suits (stars, hearts, bells, and flowers). Have students take turns choosing a card from the pocket on the bulletin board and placing it in the correct column. Another option is to display all cards but label 2 or 3 cards in the wrong columns. Have students identify cards that should be moved.

Tips for Managing Cards

- Card Labels** Each card set has a unique color. This makes it easy to find the correct card pocket when putting away sets of cards.
- Volunteer Organizers** You may want to assign volunteers to keep the cards organized and to replace missing cards. One or more students can be assigned to collect the returned card sets and reshuffle them. If shuffling is difficult, cards can be randomly placed one-at-a-time onto one or four stacks and then combined.
- Returned Sets** You may want to display extra pockets or a "return box" as a place for students to place cards when they finish a game or activity. Remind students to return the wild cards and any other cards not used during the game or activity.

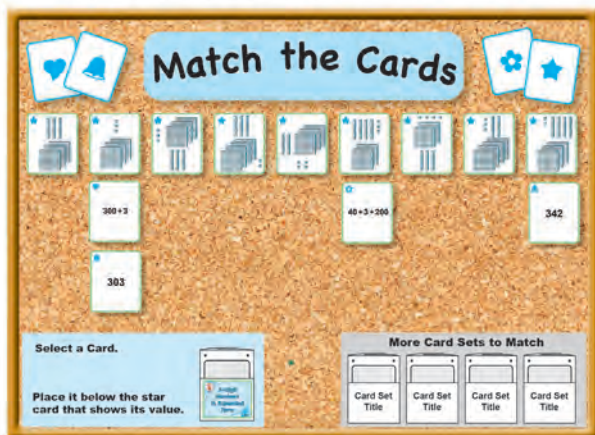


Card Storage Pocket

Bulletin Board

Use the bulletin board for practice with matching most extra card sets in storage bins. A sample bulletin board is shown below.

Use the bulletin board. Accent the four suits. Cards to feature on the bulletin board a way to mount the cards. One of each card so students can "star" cards across the top row of students to sort.



Students can sort and match cards directly on the bulletin board, or choose a set of cards to use for a game with a partner or small group.

The second section of the resource contains the printable math card sets and more!

Set of 40 Math Cards

# 3-Digit Numbers in Expanded Form

PREVIEW



Set 2B17

### Card Section Contents

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This page describes math topics that students will discuss as they play games.

- Each “flower” card shows the a sum of hundreds, ten, and ones in the same order as on the related “star” card. The “heart” cards show the same addends in decreasing order by place value.
- Each “bell” card shows the number in standard form.

**Meaning of Set Code 2B17**

The code stands for Grade 2, Unit 1, Cluster 1, Goal 7, and matches the goal number of the student-friendly goals checklist by Angie Sletzer.

**Making Generalizations**

As students use the cards, encourage them to look for and discuss patterns and generalizations.

- When you write a number in standard form, be careful of the order. Hundreds come before tens and tens come before ones.
- Make sure to write a zero to hold the place of the tens if there are no blocks on the star card for that place.
- When you change the order of numbers being added, the sum stays the same.



Stars

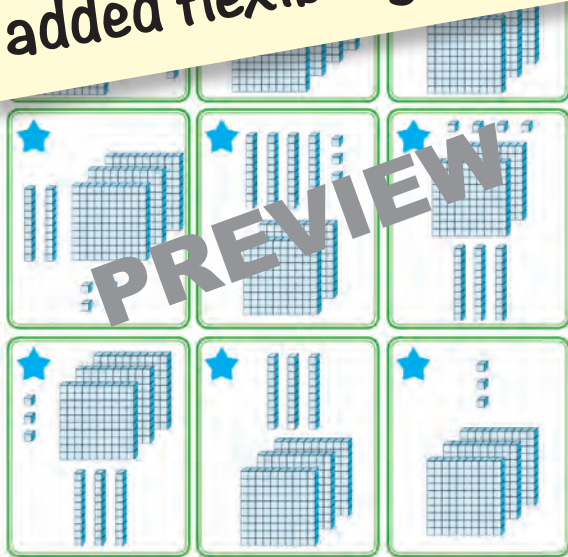


Hearts



Title, Wilds, & Game Instruction Cards		Set 2B17
<p><b>3-Digit Numbers in Expanded Form</b></p> <p>2B17</p>	<p><b>Pairs Challenge</b></p> <p>Players: 2-3 Time: 5-15 minutes Object: Earn the most points from matches. Setup: Deal six cards to each player. (Wild cards are not needed.) Instructions: Players look at their cards to see if there are any matching cards. Each matching pair is worth 1 point. A set of three matching cards is worth 3 points. The player with the most points wins. (Some games will end as a tie.) Repeat the game several times.</p>	<p><b>Crazy Match</b></p> <p>This game is similar to Crazy 8s or UNO. Players: 2-4 (Use a double set if there are 3-4 players.) Time: 20-30 minutes Object: Be the first to run out of cards. Setup: Deal 7 cards per player. Turn up a card for the Discard pile. Place the rest in a Draw pile. Instructions: Players take turns matching a card from their hand to the top card on the Discard pile. They can match the number, suit, or play a Wild card. If a player has no card to play, he or she must draw two cards from the Draw pile and the turn ends. When a player plays a wild card, the player must name a suit for the next player to match. Play goes on until a player runs out of cards. That player wins.</p>
<p>Wild</p>	<p><b>Concentration</b></p> <p>Players: 2-4 Time: 15-30 minutes Object: Match the most pairs of cards. Setup: Use four groups of base ten blocks. Place cards face down in front of each group. Instructions: Each player in turn turns over one card. If the cards match, the player takes the pair and saves the two cards and the turn ends. If they do not match, the player turns the cards back over. The next player then takes a turn. Play goes on until all cards are paired. The player with the most pairs wins.</p>	<p><b>Make a Wish</b></p> <p>Player: (with aide or older student) Time: 10-15 minutes Object: Make a wish. Setup: Turn up all of the cards. Shuffle and place into four groups of four cards. Shuffle and place into four groups of four cards. Face up. (Use wild cards.) Instructions: The player looks at the cards, picks two cards that match, and says a wish. The player continues to look for matching pairs. When there are no more matching pairs, the game is over. If the player clears all cards without getting stuck, the player wins! Then he or she can make a wish!</p>
<p>Wild</p>	<p>Wild</p>	<p>Wild</p>

All 36 math cards & spare blank cards are marked with suits for added flexibility.



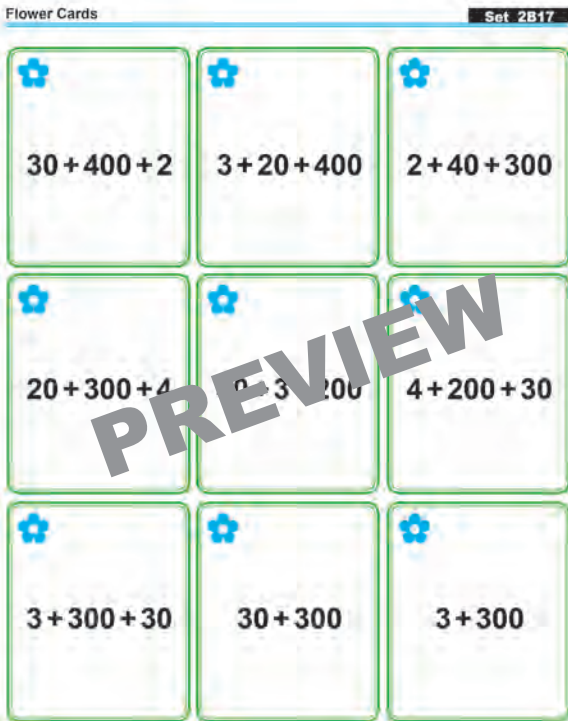
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15



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Card Set 2B17



PREVIEW Spare Blank Cards

Each set has exit tickets, recording worksheet(s), answers, and a folding card storage pocket.

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My favorite part was \_\_\_\_\_

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NAME \_\_\_\_\_

**CONCENTRATION**  
**EXIT TICKET**

One thing I learned was \_\_\_\_\_

My favorite part was \_\_\_\_\_

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NAME \_\_\_\_\_

**GOALS & WISH**  
**EXIT TICKET**

One thing I learned was \_\_\_\_\_

My favorite part was \_\_\_\_\_

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Date \_\_\_\_\_

**3-Digit Numbers in Expanded Form**

**Instructions:** Write the addends for the blocks. Then write the addends in a better order and write the standard form.

Example:

$30 + 400 + 2$	_____	_____
$400 + 30 + 2$	_____	_____
$432$	_____	_____

20 Card Set 2B17 © K8MathSense. All Rights Reserved.

**ANSWERS**

**3-Digit Numbers in Expanded Form**

**Instructions:** Write the addends for the blocks. Then write the addends in a better order and write the standard form.

<p>Sample:</p> $30 + 400 + 2$ $400 + 30 + 2$ $432$	 $4 + 200 + 30$ $200 + 30 + 4$ $234$	 $20 + 300 + 4$ $300 + 20 + 4$ $324$
 $3 + 300 + 3$ $300 + 30 + 3$ $333$	 $30 + 300 + 30$ $300 + 30 + 30$ $330$	 $40 + 3 + 200$ $200 + 40 + 3$ $243$
 $3 + 20 + 400$ $400 + 20 + 3$ $423$	 $3 + 300$ $300 + 3$ $303$	 $2 + 40 + 300$ $300 + 40 + 2$ $342$

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**Folding Card Storage Pocket**

**Instructions**

- Using entire page, make mountain folds along all three horizontal dotted lines. Turn folded page to look like this:
 

Title	Card Pocket
	Title
- Fold back the side flaps along the dashed lines. On the back side, tuck one folded flap inside the other.
- To display on bulletin board, place tacks at black dots. Place card set into pocket.

**3-Digit Numbers in Expanded Form**

2B17

Card Pocket

↓ ↓ ↓