Board Games for Early Mathematics: Place Value

Start at the beginning, and stick to the order given. Skipping is OK if a learner can use the concepts to solve problems. For tips, background info, and an assessment to show if a different section would help, visit reckonmath.com.

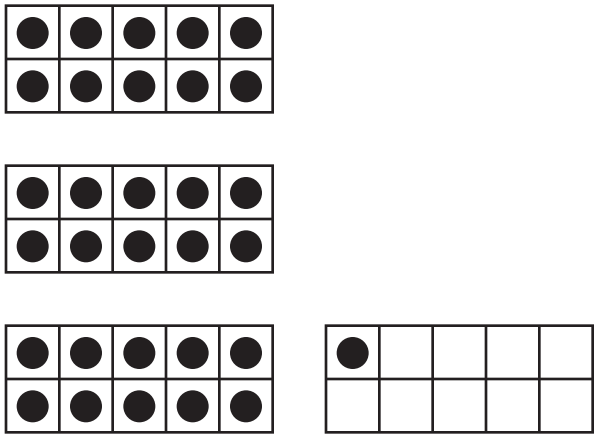
This packet includes these place value games and activities:

Think about place value
Make huge numbers
Which is more? 2-digit numbers
Which is more? 3-digit numbers
Which is less? 2-digit numbers
Which is less? 3-digit numbers
How many tens, how many ones
Find the ones place
Find the tens place
Find the ones or tens place
Identify odd and even 2-digit numbers
Find the value of digits in the ones place
Find the value of digits in the tens place
Find the value of digits in the hundreds place
Find the value of digits in different places, 2-digit numbers
Find the value of digits in different places, 3-digit numbers
Ones place, tens place, hundreds place
Use addition to think about place value
One thousands place, ten thousands place, hundred thousands place
Name numbers to the hundred thousands place

Think about place value

Moving things into groups of ten helps you see how many.

Person A says "**Here are 31 dots.**"



Person B says "**Here are 31 dots.**"

If you had only ten seconds to choose, who would you believe, Person A or Person B?

Person B is easier to believe, because Person B organized the dots using place value: 31 is the same as 3 tens plus 1 one.

Using place value to organize numbers makes keeping track of large numbers much easier.

By the way, Person A was not telling the truth! Count and see.

Questions? **reckonmath.com**

An adult helper can walk learners through this discussion activity, or learners who are comfortable reading can work on their own or with a partner. Learners who aren't used to talking about a text with a partner can use this method: Put a check mark next to any line that makes sense right away. Now look at one of the other lines. Talk about the line with each other. Can the two of you figure out why it makes sense? If you can, put a check mark by it. If you can't, move on to another line. Keep doing this until you have tried to figure out every line. If any lines still don't have a check mark, ask someone else to help you understand why those lines make sense.

Skill Builders: Name numerals (NP)

Make huge numbers

How much the dice mean depends on where they are.

CCSS.MATH.CONTENT.4.NBT.A.1

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Seven ten-sided dice.

A learner rolls all seven dice at the same time. A learner moves one die to the arrow. The adult helper says the number (for example: "9"). A learner moves another die to the right of the first one, and the helper says the new number (for example: "93" if the new die is showing a 3). Learners keep adding one die at a time on the right, and the helper keeps saying the names. **Example: 9** Nine. **93** Ninety-three. **936** Nine hundred thirty-six. **9,362** Nine thousand, three hundred sixty-two. **93,627** Ninety-three thousand, six hundred twenty-seven. **936,278** Nine hundred thirty-six thousand, two hundred seventy-eight. **9,362,785** Nine million, three hundred sixty-two thousand, seven hundred eighty-five.

PV

Which is more? 2-digit numbers

I rolled a _____ and a _____. I will make the number _____.

Four ten-sided dice, and two counters.

Questions? **reckonmath.com**

Player 1 START										**Player 1 END**

Player 2 START										**Player 2 END**

How to play: Each player puts a counter on that player's START. On each turn, both players roll two dice each. For each player: Arrange your two dice to make a 2-digit number, and say the number. **Example:** If you roll a 2 and a 5, you could put the 2 on the left and the 5 on the right and say "Twenty-five." Or, you could put the 5 on the left and the 2 on the right and say "Fifty-two." Who has made a greater (this means larger) number? That player moves forward one. If both numbers are the same, roll again. **The first player to land on END wins.**

Skill Builders: Which is more? and Which is less? games (NP), Make 2-digit numbers (NP)

CCSS.MATH.CONTENT.2.NBT.A.1

Which is more? 3-digit numbers

I rolled a _____, a _____, and a _____. I will make the number _____.

Six ten-sided dice, and two counters.

Questions? reckonmath.com

Player 1 START										**Player 1 END**

Player 2 START										**Player 2 END**

How to play: Each player puts a counter on that player's START. On each turn, both players roll three dice each. For each player: Arrange your three dice to make a 3-digit number, and say the number. **Example:** If you roll a 7, a 4 and a 6, you could put the 7 on the left, the 4 in the middle, and the 6 on the right, and say "Seven hundred forty-six." Or, you could put the 4 on the left, the 6 in the middle, and the 7 on the right, and say "Four hundred sixty-seven." Who has made a greater (this means larger) number? That player moves forward one. If both numbers are the same, roll again. **The first player to land on END wins.**

Skill Builders: Which is more? and Which is less? games (NP), Which is more, 2-digit numbers (PV), Make 3-digit numbers (NP)

CCSS.MATH.CONTENT.2.NBT.A.1

Which is less? 2-digit numbers

I rolled a _____ and a _____. I will make the number _____.

Four ten-sided dice, and two counters.

Questions? **reckonmath.com**

Player 1 START										**Player 1 END**

Player 2 START										**Player 2 END**

How to play: Each player puts a counter on that player's START. On each turn, both players roll two dice each. For each player: Arrange your two dice to make a 2-digit number, and say the number. If you roll a zero, you can put it on the left to make the first digit be zero. **Did you know** that the number 05 is the same as the number 5? It's true. **Example:** If you roll a 2 and a 5, you could put the 2 on the left and the 5 on the right and say "Twenty-five." Or, you could put the 5 on the left and the 2 on the right and say "Fifty-two." Who has made a lesser (this means smaller) number? That player moves forward one. If both numbers are the same, roll again. **The first player to land on END wins.**

Skill Builders: Which is more? and Which is less? games (NP), Which is more, 2-digit numbers (PV), Make 2-digit numbers (NP)

CCSS.MATH.CONTENT.2.NBT.A.1

Which is less? 3-digit numbers

I rolled a _____, a _____, and a _____. I will make the number _____.

Six ten-sided dice, and two counters.

Questions? reckonmath.com

Player 1 START										**Player 1 END**

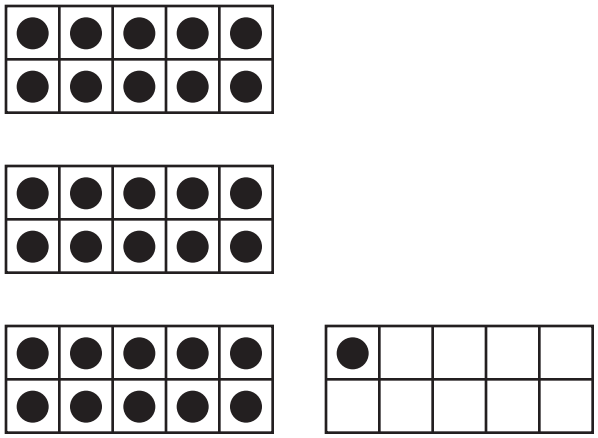
Player 2 START										**Player 2 END**

How to play: Each player puts a counter on that player's START. On each turn, both players roll three dice each. For each player: Arrange your three dice to make a 3-digit number, and say the number. If you roll a zero, you can put it on the left to make the first digit be zero. **Did you know** that the number 051 is the same as the number 51? It's true. **Example:** If you roll a 7, a 4 and a 6, you could put the 7 on the left, the 4 in the middle, and the 6 on the right, and say "Seven hundred forty-six." Or, you could put the 4 on the left, the 6 in the middle, and the 7 on the right, and say "Four hundred sixty-seven." Who has made a lesser (this means smaller) number? That player moves forward one. If both numbers are the same, roll again. **The first player to land on END wins.**

CCSS.MATH.CONTENT.2.NBT.A.1 Skill Builders: Which is more? and Which is less? games (NP), Which is more, 3-digit numbers (PV), Which is less, 2-digit numbers (PV), Make 3-digit numbers (NP)

How many tens, how many ones

The digits show how many tens and how many ones.



Person B says "**Here are 31 dots.**"

The number 31 means 3 tens and 1 one.

The place in the number 31 where the digit 1 is
is called the ones place.
It is not called the ones place because the digit there is 1.
It is called the ones place because when a digit is is there,
it means how many ones.

The place to the left of the ones place, where the 3 is,
is called the tens place, because when a digit is there,
it means how many tens.

Questions? **reckonmath.com**

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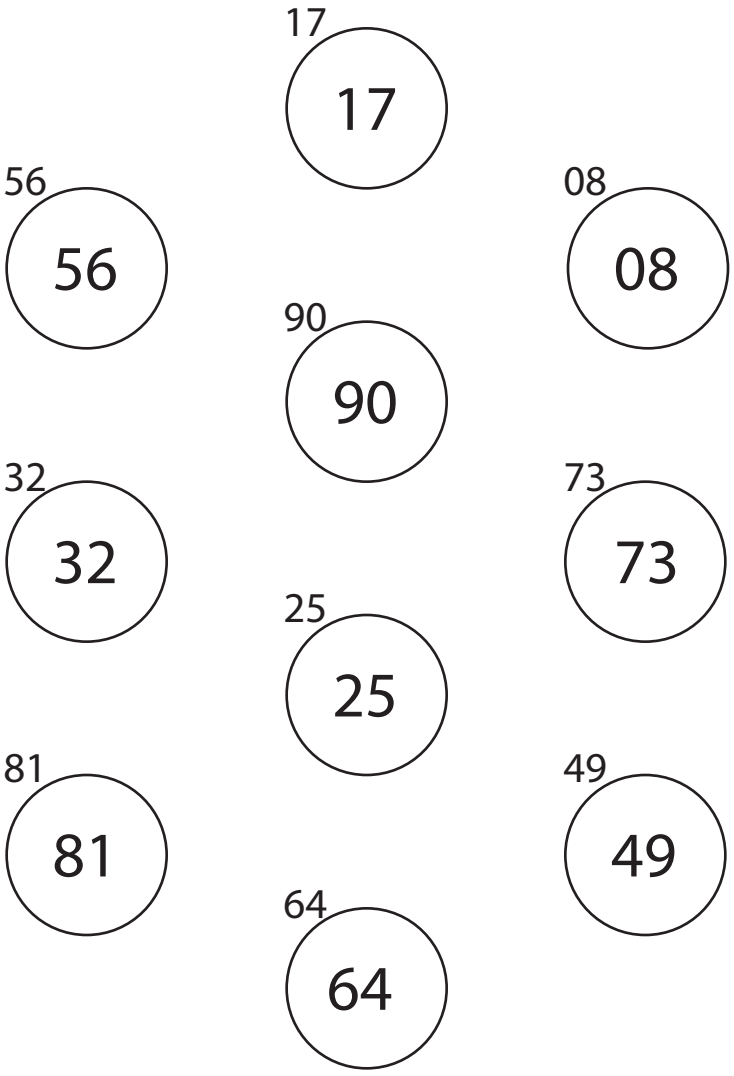
Find the ones place

I rolled _____. It is in the ones place in the number _____.



Questions? **reckonmath.com**

One ten-sided die, and counters in two colors.

In the number 31, the ones place is the place where the digit 1 is. It is not the ones place because the digit there is 1. It is the ones place because when a digit is there, it means how many ones. The place to the left of the ones place, where the digit 3 is, is called the tens place, because when a digit is there, it means how many tens.

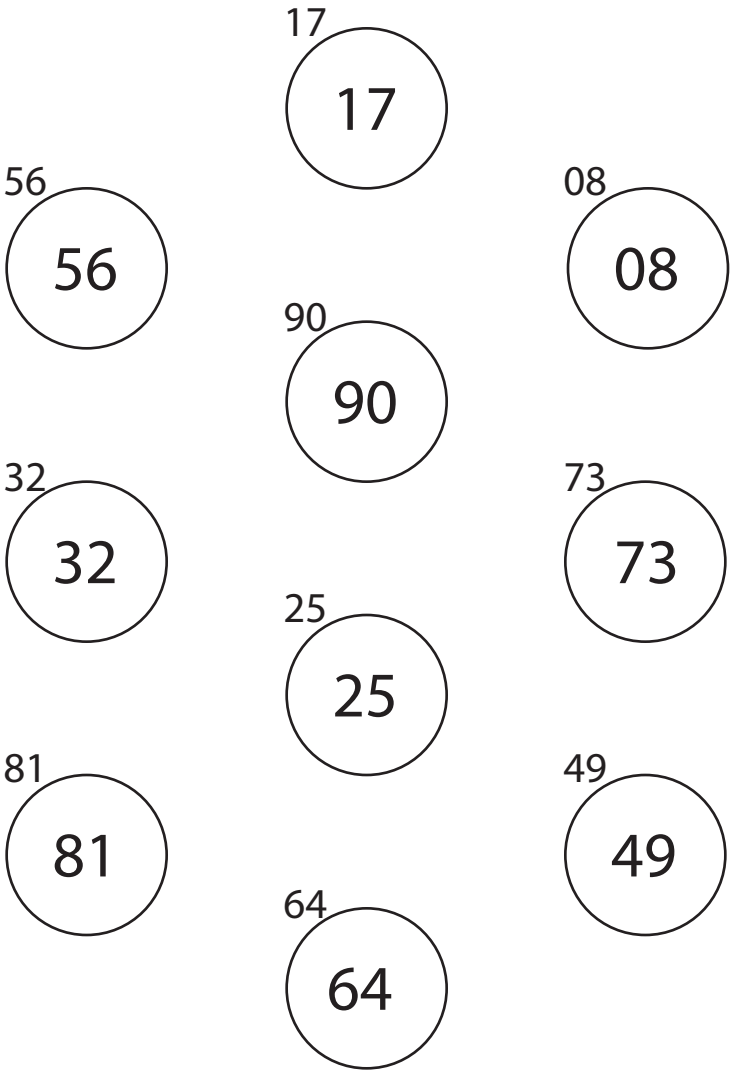
How to play: On your turn, roll the die. Find the number with the digit you rolled in the ones place and put a counter on that number.

Example: If you roll a 3, put your counter in the 73 circle. If the other player's counter is already there, you can bump it off. **When all the spaces are filled, whoever has more counters on the board wins.the board wins.**

PV

Find the tens place

I rolled _____. It is in the tens place in the number _____.



Questions? **reckonmath.com**

PV

One ten-sided die, and counters in two colors.

In the number 31, the ones place is the place where the digit 1 is. It is not the ones place because the digit there is 1. It is the ones place because when a digit is there, it means how many ones. The place to the left of the ones place, where the digit 3 is, is called the tens place, because when a digit is there, it means how many tens.

How to play: On your turn, roll the die. Find the number with the digit you rolled in the tens place and put a counter on that number.

Example: If you roll a 3, put your counter in the 32 circle. If the other player's counter is already there, you can bump it off. **When all the spaces are filled, whoever has more counters on the board wins.**

Find the ones or tens place

I rolled _____. It is in the number _____.
It is in the [ones / tens] place.

38	96	13	60	89	02	45
74	27	51	24	61	82	58
05	39	17	46	90	73	10
21	07	83	48	76	35	64
92	59	72	29	47	50	85
11	94	08	36	63	98	23

Questions? **reckonmath.com**

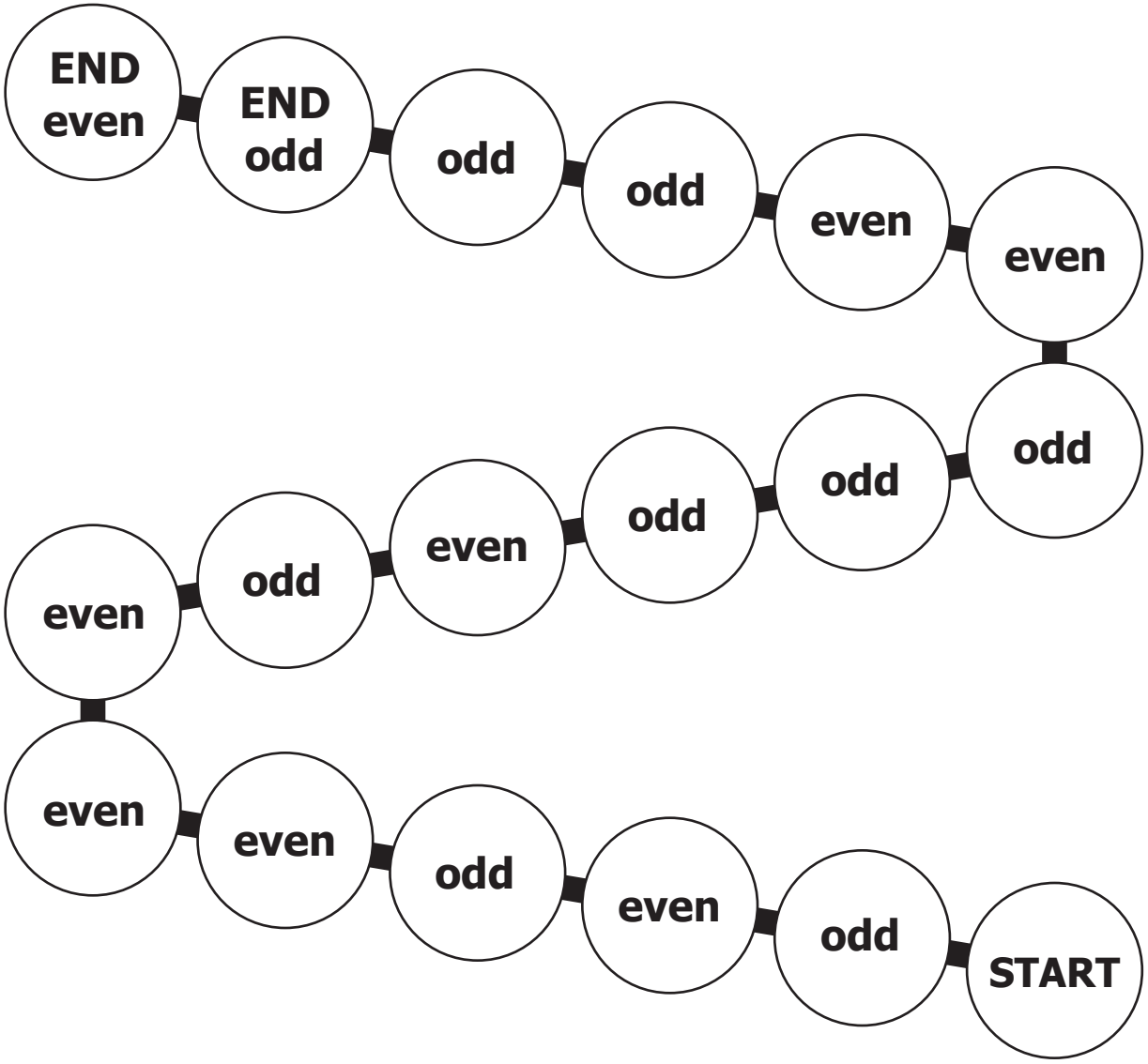
One ten-sided die, and counters in two colors.

How to play: Decide which player will take the ones place, and which player will take the tens place. On your turn, if you are the ones place player, roll the die and find a number with that digit in the ones place. If you are the tens place player, roll the die and find a number with that digit in the tens place. **Example:** If you roll a 4, and you are the ones place player, you could cover 14. Or, if you roll a 4 and you are the tens place player, you could cover 41. **The first player to get four in a row wins.** When you finish the game, play again. This time, whoever took the ones place the first time takes the tens place, and whoever took the tens place the first time takes the ones place.

PV

Identify odd and even 2-digit numbers

_____ is the number. It is [even / odd].



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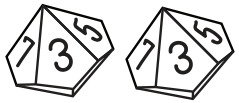


Two ten-sided dice, and two counters.

Any number is even if the digit in the ones place is even. Any number is odd if the digit in the ones place is odd. **Note:** Zero is even.

How to play: Each player puts a counter on START. On your turn, roll the dice. If you roll a zero, it means zero. Arrange the dice to make a 2-digit number. If the number is odd, move your counter to the next "odd" circle. If it is even, move your counter to the next "even" circle.

Example: If you roll a 3 and a 4, you could make 34 and move to the next "even" circle, or you could make 43 and move to the next "odd" circle. **The first player to land on either END circle wins.**

PV

CCSS.MATH.CONTENT.2.OA.C.3 Skill Builders: Identify odds and evens (NP), Find the ones place (PV), Find the tens place (PV), Make 2-digit numbers (NP)

Skill Builders: Find the ones or tens place (PV)

CCSS.MATH.CONTENT.2.NBT.A.1

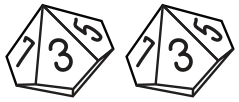
Find the value of digits in the ones place

I rolled _____. It is in the number _____. Its value is _____.

4	9	8	6	7
3	5	2	0	1
8	4	**FREE SPACE**	0	9
5	7	1	6	3
2	7	3	4	1

Questions? **reckonmath.com**

PV



Two ten-sided dice, and counters in two colors.

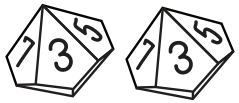
In this game you get to practice using the word "value". The value of a digit is how much it is worth in the number it is in. When a digit is in the ones place, it is worth that many ones. So the value of a 3 in the ones place is 3. **How to play:** On your turn, roll both dice. Arrange them to make a 2-digit number and say the number. Now, say the value of the digit in the ones place. Cover the value. If the answer is not available, it is the other player's turn. **Example:** If the dice are showing 26, the digit 6 has the value of 6. **The first player to get five in a row wins.** If the board fills and no one has five in a row, the player with more counters wins.

Find the value of digits in the tens place

I rolled _____. It is in the number _____. Its value is _____.

40	90	80	60	70
30	50	20	0	10
80	40	**FREE SPACE**	0	90
50	70	10	60	30
20	70	30	40	10

PV



Two ten-sided dice, and counters in two colors.

In this game you get to practice using the word "value". The value of a digit is how much it is worth in the number it is in. When a digit is in the tens place, it is worth that many tens. So the value of a 3 in the tens place is 30. **How to play:** On your turn, roll both dice. Arrange them to make a 2-digit number and say the number. Now, say the value of the digit in the tens place. Cover the value. If the answer is not available, it is the other player's turn. **Example:** If the dice are showing 26, the digit 2 has the value of 20. **The first player to get five in a row wins.** If the board fills and no one has five in a row, the player with more counters wins.

Find the value of digits in the hundreds place

I rolled _____. It is in the number _____. Its value is _____.

400	500	200	600	800
700	100	300	100	400
600	200	**FREE SPACE**	500	500
800	0	700	900	600
900	300	400	0	300

PV

Three ten-sided dice, and counters in two colors.

In this game you get to practice using the word "value". The value of a digit is how much it is worth in the number it is in. When a digit is in the hundreds place, it is worth that many hundreds. So the value of a 3 in the hundreds place is 300. **How to play:** On your turn, roll the dice. Arrange them to make a 3-digit number and say the number. Now, say the value of the digit in the hundreds place. Cover the value. If the answer is not available, it is the other player's turn. **Example:** If the dice are showing 263, the digit 2 has the value of 200. **The first player to get five in a row wins.** If the board fills and no one has five in a row, the player with more counters wins.

Find the value of digits in different places, 2-digit numbers

I rolled _____. It is in the number _____. Its value is _____.

98	61	49	32	53	75	0
34	82	67	28	65	97	31
70	19	85	41	17	83	16
27	3	76	39	80	58	62
45	10	51	92	74	24	71
56	4	93	26	9	48	59

Questions? **reckonmath.com**

One ten-sided die, and counters in two colors.

In this game, you find the value of digits in the ones and tens places. **How to play:** On your turn, roll the die. If you roll a zero, it means zero. Choose a space where one of the digits is what you rolled. Say the number's name, and then say the value of your digit in that number.

Example: If you roll a 5, you can choose the space with 51 in it. Say "51, the value of the 5 is 50." Then, place a counter on that space. **The first player to get four in a row wins.**

PV

Skill Builders: Previous place value games

CCSS.MATH.CONTENT.2.NBT.A.1

Skill Builders: Previous place value games

CCSS.MATH.CONTENT.2.NBT.A.1

Find the value of digits in different places, 3-digit numbers

I rolled _____. It is in the number _____. Its value is _____.

106	974	258	316	832	904	756
79	401	385	230	586	194	279
350	142	86	731	476	259	800
681	294	573	920	165	438	97
839	5000	5001	2	642	395	870
416	385	16	492	746	35	19

Questions? **reckonmath.com**

One ten-sided die, and counters in two colors.

In this game, you find the value of digits in the ones, tens, and hundreds places.

How to play: On your turn, roll the die. If you roll a zero, it means zero. Choose a space where one of the digits is what you rolled. Say the number's name, and then say the value of your digit in that number.

Example: If you roll a 5, you can choose the space with 357 in it. Say "357, the value of the 5 is 50." Then, place a counter on that space.

The first player to get four in a row wins.

PV

Ones place, tens place, hundreds place

_____ is in the ones place,
_____ is in the tens place,
_____ is in the hundreds place.

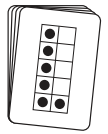
hundreds tens ones ←

Draw 1		809	Draw 6		057
Draw 2		471	Draw 7		57
Draw 3		562	Draw 8		24
Draw 4		368	Draw 9		8
Draw 5		123	Draw 10		6

CCSS.MATH.CONTENT.2.NBT.A.1 Skill Builders: Find the value of digits in different places, 3-digit numbers (PV)

Questions? **reckonmath.com**

PV



A deck of ten frame cards, and counters in two colors.

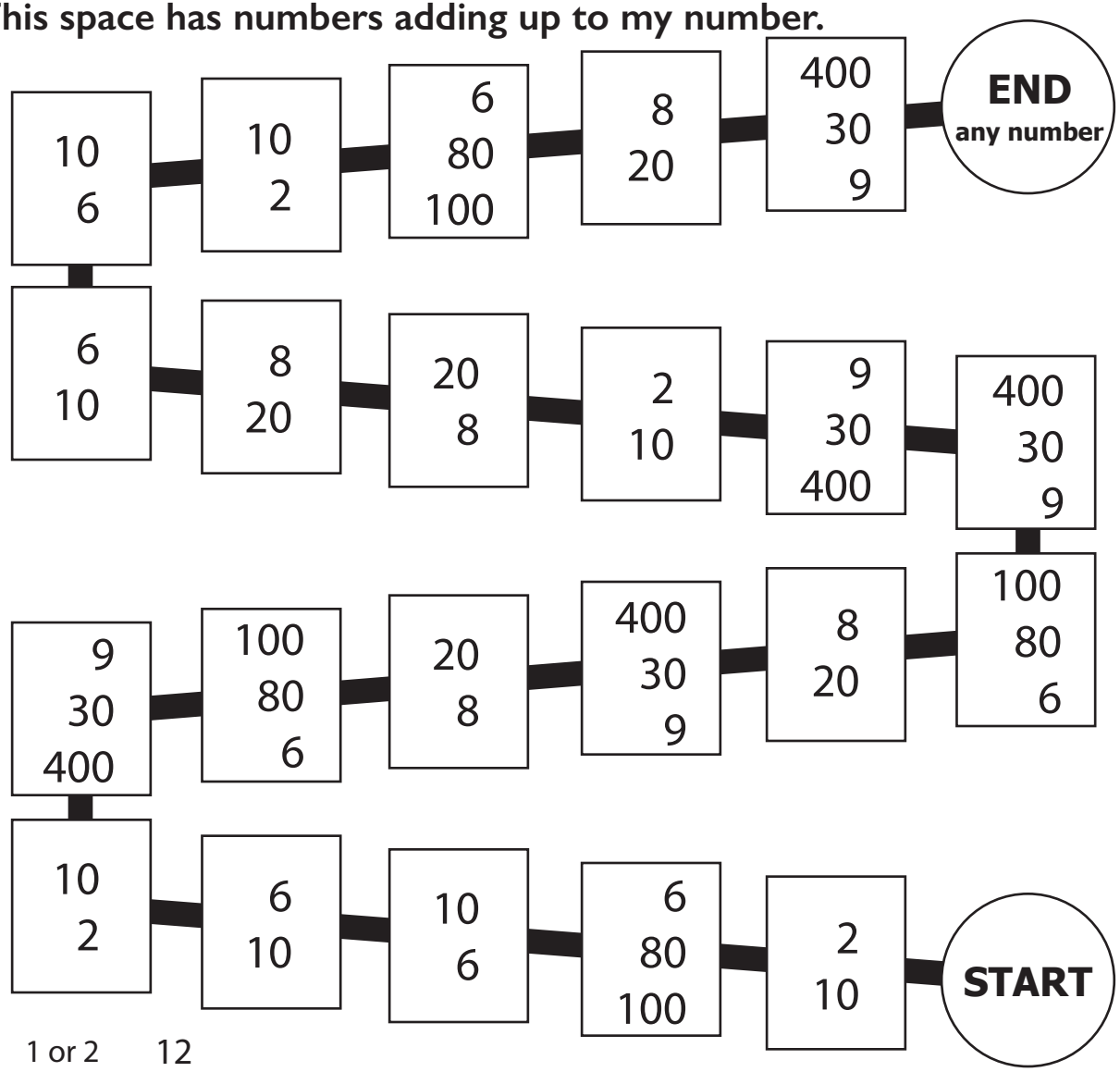
Every whole number, no matter what it is, always has a digit in the ones place. That is why the ones place is a good place to start when you are saying what digits are in what places.

How to play: On your turn, draw a card and find that square. Now, look at the number and say what digit is in each place. Start at the ones place on the right, and then go left. **Example:** If you draw a 4, the number is 368, so say "8 is in the ones place, 6 is in the tens place, 3 is in the hundreds place." Place a counter in the square next to the number. If your opponent's counter is there, you can bump it out and put your counter there. **When all the squares have a counter, the player with more counters wins.**

Use addition to think about place value

My number is _____.

This space has numbers adding up to my number.



1 or 2	12		
3 or 4	16	7 or 8	186
5 or 6	28	9 or 10	439

Questions? **reckonmath.com**

A ten-sided die, and two counters.

12 is the same as 2 + 10. You can see this because the number 12 has a 2 in the ones place and a 1 in the tens place. The 2 is the 2 in 2 + 10. The 1 is the 10 in 2 + 10. **How to play:** Each player puts a counter on START. On your turn, roll the die. If you roll a zero, it means ten. On the table below the board, look for the number you rolled, and find the number to its right. Now jump to the next space where the numbers in the space add up to that number. **Example:** If you roll a 6, the number is 186, so jump to the next space that has a 6, an 80, and a 100 (in any order). **The first player to land on END wins.**

PV

CCSS.MATH.CONTENT.2.NBT.A.1 Skill Builders: Previous place value games, Commutative property of addition (A)

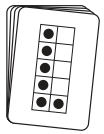
One thousands place, ten thousands place, hundred thousands place

_____ is in the one thousands place,
_____ is in the ten thousands place,
_____ is in the hundred thousands place.

hundred thousands ten thousands one thousands ←

Draw 1		618,407	Draw 6		85,796
Draw 2		618,000	Draw 7		85,000
Draw 3		924,716	Draw 8		16,730
Draw 4		924,000	Draw 9		4,321
Draw 5		473,000	Draw 10		4,000

Questions? **reckonmath.com**



A deck of ten frame cards, and counters in two colors.

In this game, you say what digits are in what places in a number. **How to play:** On your turn, draw a card and find that square. Look at the number and say what digit is in each place. Start at the ones place on the right, and then go left. **Example:** If you draw a 3, the number is 924,716, so say "6 is in the ones place, 1 is in the tens place, 7 is in the hundreds place, 4 is in the one thousands place, 1 is in the ten thousands place, 7 is in the hundred thousands place." Place a counter in that square. If your opponent's counter is there, you can bump it out and put your counter there. **When all the squares have a counter, the player with more counters wins.**

PV

Name numbers to the hundred thousands place

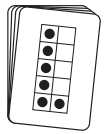
I can say the names of very big numbers.

Draw 1		382,761	Draw 6		89,130
Draw 2		534,268	Draw 7		16,325
Draw 3		751,809	Draw 8		95,746
Draw 4		368,254	Draw 9		74,329
Draw 5		264,297	Draw 10		2,683

Skill Builders: Previous place value games

CCSS.MATH.CONTENT.4.NBT.A.2

Questions? **reckonmath.com**



A deck of ten frame cards, and counters in two colors.

In this game, you say the names of numbers. In English and many other languages, the names of numbers start with the name of the digit on the left. **Example:** If the number is 382,761 you start with the 3 and say "Three hundred eighty-two thousand, seven hundred sixty-one." **How to play:** On your turn, draw a card and find that square. Now, look at that number. Say the number's name. Place a counter in the square next to the number. If your opponent's counter is there, you can bump it out and put your counter there. **When all the squares have a counter, the player with more counters wins.**

PV