

The Village School's Rising 2nd Grade Math Packet



Name: _____

Please read the following pages for optional activities to complete over the summer in anticipation for the first day of school in August.

Dear Parents,

An important part of second grade is building number sense. These are the years that a mathematical foundation is formed and this has a lasting effect over future success in math. As second grade teachers, we feel that it is imperative that students work on fact fluency for speed and accuracy, and automaticity for making ten. All of the activities included are optional, but we do strongly recommend that your child practice number sense to best prepare them for the upcoming year.

We also want the children to gain a love for math. This packet is full of games that will help your child to build number sense. The only things that you need to supply are dice (if you choose to play connect four, you can order blank dice on Amazon and make the 6-10 die yourself), playing cards and a few minutes each day to spend playing with your child.

We are also suggesting that you spend a few minutes each day to have your child practice with flashcards. It is best to work on one set of facts at a time and then add another set as they become proficient. For example, begin with the 2 facts ($2+1$, $2+2$, $2+3$...). Once those are mastered move to the 3 facts. Begin with addition, and then add on the subtraction facts.

We look forward to working with your children next year!

Have a wonderful summer,

Mrs. Bendowski and Ms. Bosi

Connect Four!

Addition

8	2	7	11	3	9	6
4	10	5	12	9	2	11
7	3	8	10	5	8	4
9	11	4	2	6	12	9
6	10	7	5	3	8	9
10	7	2	11	6	3	12

How To Play:

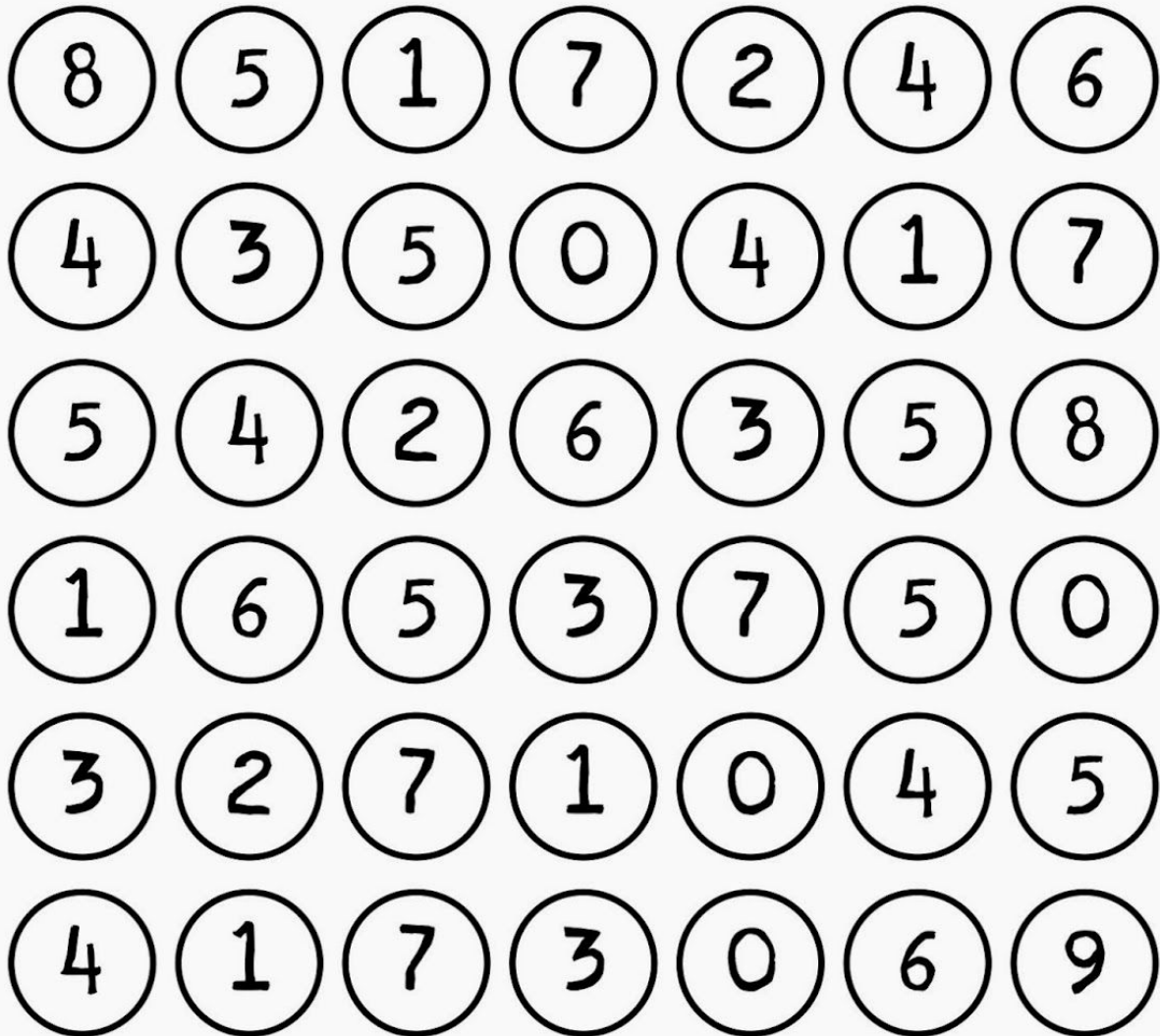
1. Roll two dice
2. Add the numbers
3. Cover the sum with your marker.
4. First player to get 4 in a row wins!

© lucky to be in first 20th

****These activities are optional and will not be graded.****

Connect Four!

Subtraction



How To Play:

1. Roll two dice (1-6 & 5-10)
2. Subtract the numbers
3. Cover the difference with your marker.
4. First player to get 4 in a row wins!

Game of PIG

Each turn, a player repeatedly rolls a **die** until either a 1 is rolled or the player decides to "hold":

- If the player rolls a 1, they score nothing and it becomes the next player's turn.
- If the player rolls any other number, it is added to their turn total and the player's turn continues.
- If a player chooses to "hold", their turn total is added to their score, and it becomes the next player's turn.
- The first player to score 100 or more points wins.



For example, the first player, Dawn begins a turn with a roll of 5. Dawn could hold and score 5 points, but chooses to roll again. Dawn rolls a 2, and could hold with a turn total of 7 points, but chooses to roll again. Dawn rolls a 1, and must end her turn without scoring. The next player, Bob, rolls the sequence 4-5-3-5-5, after which he chooses to hold, and adds his turn total of 22 points to his score.

Variations of Pig:

A. Common Rule Variations

- Two dice: two dice are rolled instead of one (See "Two Dice Pig" below)
- Any number of dice ("Hog" variation): the player rolls only once per turn with an arbitrary number of dice.
- 6 is bad: a roll of 6 is treated as a roll of 1.

B. Two-Dice Pig - Same rules as Pig, except:

- Two standard dice are rolled. If neither shows a 1, their sum is added to the turn total.
- If a single 1 is rolled, the player scores nothing and the turn ends.
- If two 1s are rolled, the player's entire score is lost, and the turn ends.
- If a double is rolled, the point total is added to the turn total as with any roll but the player is must roll again

C. Big Pig – Same as Two-Dice Pig, except:

- If two 1s are rolled, the player adds 25 to the turn total.
- If other doubles are rolled, the player adds twice the value of the dice to the turn total.

****These activities are optional and will not be graded.****

Make 10

Players 2

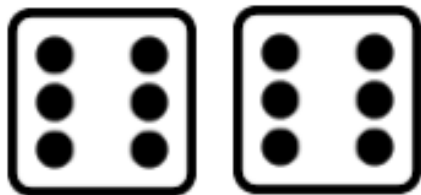
Materials: 1 or 2 dice, scratch paper

One die version: One die is rolled. Players try to find what number needs to be added to make ten. The number needed to make ten becomes the player's score for that round.



is rolled, then a player would say 7 to make a 10 and their score is 7.

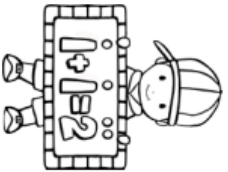
Two dice version: Two dice are rolled. Players must add or subtract to make a ten.



two sixes are rolled. $6 + 6 = 12$ so $12 - 2 = 10$ so 2 is the score.

****These activities are optional and will not be graded.****

Roll & Race Number Sentences



Directions:
Roll a die. Use the three numbers from the first box in the row that matches the number you rolled to make an addition or subtraction number sentence.
Cover that box. Continue until you have a row that takes 1st, 2nd, and 3rd place.
Optional: Use the recording sheet to write your answer.

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

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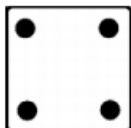
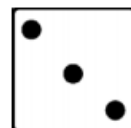
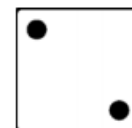
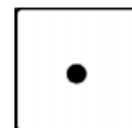
Fact Families to 20

****These activities are optional and will not be graded.****



Roll & Race Recording Page



Use this page to write the answers to your Roll & Race game board.

****These activities are optional and will not be graded.****

101 and Out







Players 2

Materials: 1 die, scratch paper







How to Play: Copy the game board below. Roll the die six times. Each roll has to count. You can count the rolls as either ones or tens. Keep a running total as you play. The closest to 101 *without going over* wins.

1	1 or 10	4	4 or 40
2	2 or 20	5	5 or 50
3	3 or 30	6	6 or 60

Player 1

											
10	+	50	+	4	+	20	+	4	+	3	=
Total <u>91</u>											

Player 2

											
50	+	6	+	10	+	30	+	2	+	4	=
Total <u>102 so out</u>											

Player 1 wins!

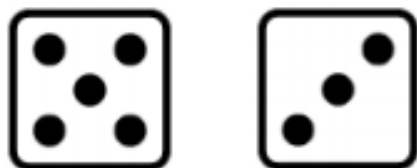
****These activities are optional and will not be graded.****

Closest to 100

Players 2

Materials: 2 dice, 120 chart (optional), scratch paper

How to Play: Roll two dice and create a 2-digit number.



This could make 53 or 35.

Now, mentally find the difference between the 2-digit number and 100. One way to find the difference is to count up. For example, if a number rolled is 53, count up by 10s and then add the 1s to get to 100.

+10 +10 +10 +10 +7
53 → **63** → **73** → **83** → **93** → **100**

53 is 47 from 100

For each round, the score is the difference from 100. The player with a score closest to 100 after 5 rounds wins.

****These activities are optional and will not be graded.****

The Game of FARKLE

(Also known as 10000, Ten Thousand, Zilch, and 6-Dice!)

The object of the game is to score a minimum of 10,000 points.

All you need to play is 6 six-sided dice, a score sheet, and optional dice cups.

How to Play

- To win at Farkle you must be the player with the highest score above 10,000 points on the final round of play.
- Each player takes turns rolling the dice. On your turn, roll all six dice.
 - A 1 or a 5, three of a kind, three pairs, or a six-dice straight earn points.
 - You must select at least one scoring die.
 - You can then pass and bank your points, or risk the points earned this turn and roll the remaining dice.
- Scoring is based on selected dice in each roll. You cannot earn points by combining dice from different rolls.
- If none of your dice rolled earn points, you get a Farkle. Three Farkles in a row and you lose 1,000 points.
- You continue rolling until you either Pass or Farkle. Then the next player rolls the six dice. Play continues until it is your turn again.
- The final round starts as soon as any player reaches 10,000 or more points.

Example:

Your first rolls show 1, 2, 3, 3, 5, and 6. You keep the 1 and the 5 for 150 points. You then opt to roll the remaining four dice. On that roll you get 3, 4, 4, and 5. You select the 5 and decide to Pass and bank your points.

Dice	Points
<i>Single Die</i>	-
1 Spot	100
5 Spot	50
<i>Combinations</i>	-
Three 2 Spot	200
Three 3 Spot	300
Three 4 Spot	400
Three 5 Spot	500
Three 6 Spot	600
Three 1 Spot	1,000
Three Pairs	500
Six-Dice Straight	1,000
Three Farkles	Lose 1,000

Scoring is based on selected dice each roll. You cannot earn [points](#) by combining dice from different rolls. For example, if you roll a 5 (50 points), and then roll two 5s (100 points), you can't combine them to form three of a kind (500 points).

The 1 and 5 spot dice are special, as they are the only dice that can be scored outside of a combination (such as three of a kind).

****These activities are optional and will not be graded.****

Pyramid: A Math Card Game to Make Ten

(This is a game of solitaire.)

First, remove all face cards (except **Ace**, which will represent the **number one**) and jokers from your deck of cards and shuffle well. Then arrange your cards into a Pyramid with 6 rows, with each row slightly overlapping the previous row. Place remaining cards in a deck, face down, off to the side.



To Play Pyramid:

The goal is to remove cards in the pyramid by "making ten" with **two cards**. (Or removing a ten card, as it is already equal to ten). However, **you can only remove cards that are completely uncovered**. Therefore, at the start of the game, you can only use the bottom row of the pyramid to make ten.

If no two cards remaining can make ten, the game is not over! Remember the deck of cards off to the side? These can be drawn from to try and find a needed card. So when there is no other option in your pyramid, **draw a card from the deck**.

Continue to draw until you can make another ten. Remove those cards, and continue to play in the same way. If you make it through the entire deck, you can flip them over and begin drawing again.

The game is over when you can no longer remove cards from your pyramid.

****These activities are optional and will not be graded.****

1+0

2+6

2+0

2+9

9+0

1+8

5+2

5+0

1+2

5+1

0+7

9+2

2+5

1+9

0+8

3+1

2+1

0+5

0+1

0+9

1+3

2+8

2+7

0+2

7+1

1+4

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6	7	2	8	5
1	10	5	6	3
9	8	FREE	11	4
10	11	2	8	9
5	3	9	4	7

Game 1

Addition Bingo: +0, +1, +2

Put your playing piece anywhere on the outside path. Move by rolling a die. When you land on an addition problem, find and dot its sum on the center bingo board. When you get five in a row, the game is over.

****These activities are optional and will not be graded.****

Game 2

16	18	14	13	19
13	11	15	16	18
17	14	FREE	14	15
19	13	11	17	13
15	11	12	16	11

Put your playing piece anywhere on the outside path. Move by rolling a die. When you land on an addition problem, find and dot its sum on the center bingo board. When you get five in a row, the game is over.

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******These activities are optional and will not be graded.******

0+7

$$\overline{\mathbf{O}} + \mathbf{G}$$

$$\frac{8}{0} +$$

$$10 + 5$$

$$01 + b$$

7+10

10 + 5

$$\frac{\infty}{0}$$

$$10 + 5$$

9+10

$$\overline{O} + \overline{G}$$

$$10 + 7$$

$$+ \overline{0}$$

$10 +$

ω_+

$$5 +$$

$$\overline{0} +$$

\bar{O}

104

$9 +$

$7 +$

5

1+1

6+6

3+3

5+5

9+9

6+6

8+8

7+7

2+2

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8	12	14	8	12
6	4	6	16	18
2	10	FREE	8	12
14	16	10	6	2
16	12	18	6	14

6+6

3+3

4+4

9+9

3+3

5+5

7+7

8+8

1+1

Doubles Addition Facts

Game 3

Put your playing piece anywhere on the outside path. Move by rolling a die. When you land on an addition problem, find and dot its sum on the center bingo board. When you get five in a row, the game is over.

6+6

8+8

4+4

3+3

1+1

5+5

7+7

2+2

6+6

4+4

2+2

6+6

4+4

8+8

****These activities are optional and will not be graded.****

1 + _ = 10

6 + _ = 10

5 + _ = 10

9 + _ = 10

2 + _ = 10

_ + 9 = 10

4 + _ = 10

_ + 2 = 10

9 + _ = 10

2 + _ = 10

3 + _ = 10

7 + _ = 10

6 + _ = 10

4 + _ = 10

3 + _ = 10

_ + 2 = 10

4 + _ = 10

_ + 5 = 10

4 + _ = 10

_ + 2 = 10

_ + 4 = 10

2 + _ = 10

5 + _ = 10

7 + _ = 10

6 + _ = 10

4 + _ = 10

3 + _ = 10

_ + 2 = 10

4 + _ = 10

_ + 8 = 10

1 + _ = 10

_ + 5 = 10

4 + _ = 10

_ + 2 = 10

_ + 4 = 10

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Make 10 Addition Facts

Game 4

9	5	4	2	9
1	3	6	1	7
3	8	FREE	7	6
9	6	5	8	3
8	6	4	4	5

Put your playing piece anywhere on the outside path. Move by rolling a die. When you land on a multiplication problem, find and dot the missing addend in the center bingo board. When you get five in a row, the game is over.

****These activities are optional and will not be graded.****