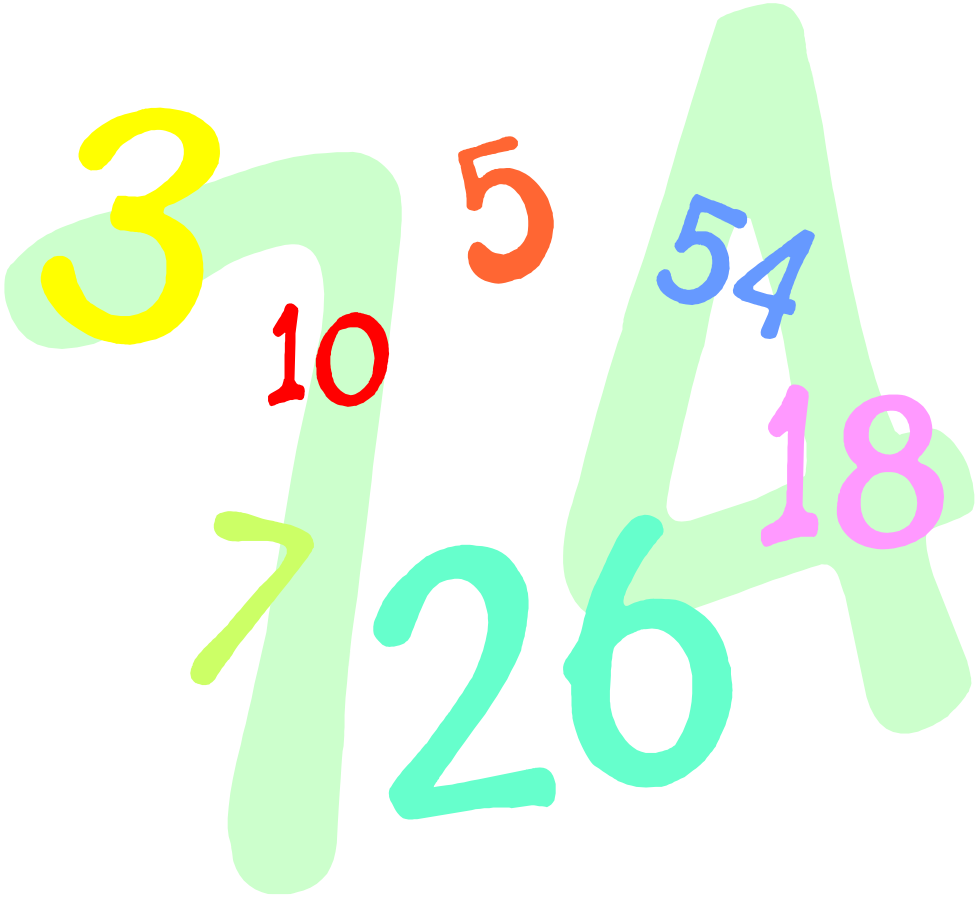
Math Matters!



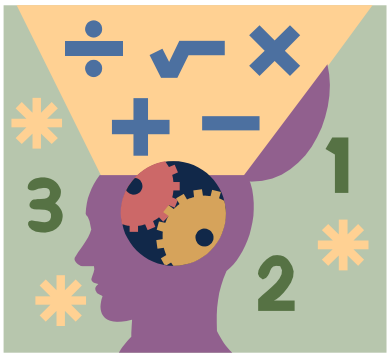
Fifth Grade

Summer Practice Packet

Colonial School District

Colonial
SCHOOL DISTRICT

Promoting a Culture of Collaboration, Innovation and Inspiration



June 2019

Dear Parents/Guardians,

First, we would like to thank you for all of the additional support you offer at home. Education is a true partnership between school and family that is essential to a child's success.

As this school year comes to a close, we wanted to again encourage you to continue to reinforce and foster the mathematical skills and practices that have been developed this year by scheduling time for your child to work through this summer math packet. The activities were selected by our grade level experts with the key mathematical concepts of the school year in mind. The ultimate goal is to reinforce and strengthen the skills that will serve as building blocks for future learning. Also, remember that your child's **DreamBox Learning account remains active over the summer months**. This is another resource that will help your child continue to progress during the summer months. In addition to these resources, there are a wealth of others on our district website.

Wishing you a relaxing, yet exciting, math-filled summer!

Sincerely,

The Curriculum Department

Math is Everywhere…..

Summer is a perfect time to do math.
Here are some fun ways to keep your kids thinking math all summer long!

Basic Facts Practice

- TRAFFIC MATH – Challenge your child to find sets of numbers that they can multiply together. For example, two (or three) numbers on the license plate in front of you, a speed limit sign, a gas price sign, etc. Passengers can compete against each other for speed, highest product, lowest product, square numbers, etc.
- WHITE STRETCH LIMO—With your family, assign points to specific vehicles that you might pass on the road. When you are the first to spot the vehicle, you get that amount of points, and add them to your previous points. For example, a red pick-up truck is worth 15 pints, a yellow Volkswagen is 12, a blue mini-van is 11, and a white stretch limo is 101 points. The first person to hit 200 points wins. Of course, there are infinite ways to assign points to increase or decrease difficulty, and points can be calculated mentally or with a paper and pencil.
- WAR—Play this card game as you normally do, but instead of flipping one card over, flip two and add or multiply the two together. The player with higher sum or product is the winner. OR, subtract the smaller number from the larger one and the larger difference is the winner. The winner is the player with the most cards at the end. (When playing card games use ace = 1, jack = 11, queen = 12, and king = 13).
- WIPE OUT—Create a board with 12 squares (see right). Fill in the squares with the numbers 1 – 12 (or use greater numbers for a more challenging game). Choose 4 numbers from the board and record them below the board. "Wipe Out" the numbers in the game board by adding, subtracting, multiplying, and dividing the chosen numbers. You may use 2, 3, or all 4 of the numbers. You may not use a number more than once. When you get a number, cross it out on the board. You have won the game when all numbers are wiped out. (Example: 8 x 2 = 16, 16 – 10 = 6)

1	2	3
4	5	~~6~~
7	8	9
10	11	12

2 5 8 10

- TELEPHONITIS—Use the phone numbers of your family and friends. Add or multiply the digits of the numbers. Whose phone number has the greatest value? Whose has the least?

Money

- Let you child estimate the total cost of items you buy at the store. For an added challenge, estimate the tax too!
- Have your child figure out the change before the cashier gives it to you, and count it to be sure it is correct.
- At a restaurant or ice cream store, estimate the total bill and include your child in figuring out the tip.
- Grab a catalog and go shopping. Tell your child to pretend that they have $100 to buy whatever they want. They must calculate exactly how much they have spent and how much they have left.
- SUPERMARKET SCAVENGER HUNT—Look at circulars and ads from different supermarkets and find the better deals at each store.
- Have your family members predict the amount of money you will spend on a shopping trip. Compare the actual amount spent to the estimates to see who was closest.

Measurement

- Ask your child to estimate the distances to regularly traveled places. Then use the odometer in your car to check the actual distances. As an alternative, ask your child to tell you when they think you have traveled one mile, then compare it to the actual measurement.
- At the supermarket, look at the labels of the items you buy and compare the weights. Grab a handful of fruit or vegetables and measure them on the scale. Always remember to estimate first.
- Have your child help you measure the ingredients when you cook.

Time

- When your child asks what time you will be leaving, tell them "in 5 minutes" and have them tell you what time that will be. OR do this in reverse – you give them the time and they tell you how many minutes until then.
- When they ask you what time it is, show them your watch instead of telling them the time.
- Ask your child to estimate the total time you will spend running an errand or set of errands. See how close they can get and watch their estimates improve with time.

Number Theory/Place Value

- CREATE A NUMBER – Each player chooses 3, 4, or 5 cards (no face value cards) from a deck of cards. Lay the cards flat side by side to create a 3, 4, or 5 digit numbers. The player with the larger (or smaller – you choose) number is the winner. The player with the most cards at the end of the game is the winner. (Don't forget to ask questions like: how do you know that it is bigger (or smaller)? Listen for words like hundreds or thousands place and value.
- I'M THINKING OF A NUMBER – You and your children can make up riddles to stump each other. Try these: I'm thinking of a number. It is even. It is less than 10. 2 and 4 are factors of this number. What is the number? (8). OR I'm thinking of a number. It has 2 digits. The tens place digit is double the ones place digit. Both digits are multiples of 3. What is the number? (63). (Use descriptions like: greater than, less than, even, odd, multiple of, factor of, double, triple, half of….).

Fractions

One of the keys to understanding fractions is to see that fractions are parts of wholes or parts of sets. You can talk about fractions with almost anything…

- FOOD FRACTIONS – Ask questions like….what fraction of the pizza is one slice? What fraction did you eat? What fraction is left?
- FAMILY FRACTIONS – Ask questions like…what fraction of our family is male? Female? Brown hair? Adults? You can do this at a picnic or on the beach, too.
- NAPKINS FRACTIONS – Fold paper napkins into equal pieces to find fractions. Start with halves and progress to eighths or sixteenths. Label the fractional parts and add or subtract the fractions.
- ANYTHING FRACTIONS – Grab a handful of cereal or blocks. Ask: find $\frac{1}{2}$ of the pile. How many is 1/3?....

Surf the Net

Here are some websites for you and your child to check out on rainy days…

www.coolmath4kids.com and www.coolmath.com
This site is an amusement part of math and especially designed for fun. The sites include lessons, games, brainteasers, and more.

www.aaamath.com
This site contains pages of basic math skills, interactive practice, explanations of concepts, and challenges. You can navigate through the site by grade level and/or topic

www.funbrain.com
This site includes math games sorted by age, topic, or specific skill. Parent/child challenges are included.

www.mathcats.com
This site is full of activities, games, crafts, flashcards, and story problems all with a focus of math and cats

www.brainpop.com
This site includes a mini movie to review a concept of your choice. Then a quiz is given to check for understanding. To log in use the following information:
Username: Backward *Password*: Forward

And….
Go to www.nctm.org and click on Families to find a list of parent math resource sites.

Dreambox Learning: go to www.colonialsd.org and click on STUDENTS in the upper left-hand corner of the page; click on Elementary School then on Math Resources; click your elementary school to go to the Dreambox log in page; have your child enter their student id number for both the username and the password

Multiplication Combinations (page 1 of 6)

One of your goals in math class this year is to learn all the multiplication combinations up to 12 × 12.

1 x 1	1 x 2	1 x 3	1 x 4	1 x 5	1 x 6	1 x 7	1 x 8	1 x 9	1 x 10	1 x 11	1 x 12
2 x 1	2 x 2	2 x 3	2 x 4	2 x 5	2 x 6	2 x 7	2 x 8	2 x 9	2 x 10	2 x 11	2 x 12
3 x 1	3 x 2	3 x 3	3 x 4	3 x 5	3 x 6	3 x 7	3 x 8	3 x 9	3 x 10	3 x 11	3 x 12
4 x 1	4 x 2	4 x 3	4 x 4	4 x 5	4 x 6	4 x 7	4 x 8	4 x 9	4 x 10	4 x 11	4 x 12
5 x 1	5 x 2	5 x 3	5 x 4	5 x 5	5 x 6	5 x 7	5 x 8	5 x 9	5 x 10	5 x 11	5 x 12
6 x 1	6 x 2	6 x 3	6 x 4	6 x 5	6 x 6	6 x 7	6 x 8	6 x 9	6 x 10	6 x 11	6 x 12
7 x 1	7 x 2	7 x 3	7 x 4	7 x 5	7 x 6	7 x 7	7 x 8	7 x 9	7 x 10	7 x 11	7 x 12
8 x 1	8 x 2	8 x 3	8 x 4	8 x 5	8 x 6	8 x 7	8 x 8	8 x 9	8 x 10	8 x 11	8 x 12
9 x 1	9 x 2	9 x 3	9 x 4	9 x 5	9 x 6	9 x 7	9 x 8	9 x 9	9 x 10	9 x 11	9 x 12
10 x 1	10 x 2	10 x 3	10 x 4	10 x 5	10 x 6	10 x 7	10 x 8	10 x 9	10 x 10	10 x 11	10 x 12
11 x 1	11 x 2	11 x 3	11 x 4	11 x 5	11 x 6	11 x 7	11 x 8	11 x 9	11 x 10	11 x 11	11 x 12
12 x 1	12 x 2	12 x 3	12 x 4	12 x 5	12 x 6	12 x 7	12 x 8	12 x 9	12 x 10	12 x 11	12 x 12

There are 144 multiplication combinations on this chart. You may think that learning all of them is a challenge. (Remember that last year you learned all of them up to a product of 50.) On the next few pages you will find some suggestions to help you learn the multiplication combinations.

As you practice these multiplication combinations, make two lists like those shown.

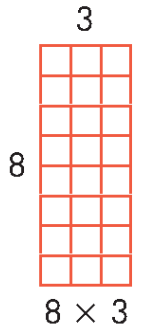
Combinations I Know	Combinations I'm Working On

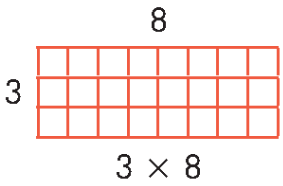
Multiplication Combinations (page 2 of 6)

Learning two combinations at a time

To help you learn multiplication combinations, think about two combinations at a time, such as 8 × 3 and 3 × 8.

These two problems look different, but have the same answer.





When you know that 8 × 3 = 24, you also know that 3 × 8 = 24.

You have learned two multiplication combinations!

By "turning around" combinations and learning them two at a time, the chart of multiplication combinations is reduced from 144 to 78 combinations to learn!

1 x 1	1 x 2	1 x 3	1 x 4	1 x 5	1 x 6	1 x 7	1 x 8	1 x 9	1 x 10	1 x 11	1 x 12
2 x 1 1 x 2	2 x 2	2 x 3	2 x 4	2 x 5	2 x 6	2 x 7	2 x 8	2 x 9	2 x 10	2 x 11	2 x 12
3 x 1 1 x 3	3 x 2 2 x 3	3 x 3	3 x 4	3 x 5	3 x 6	3 x 7	3 x 8	3 x 9	3 x 10	3 x 11	3 x 12
4 x 1 1 x 4	4 x 2 2 x 4	4 x 3 3 x 4	4 x 4	4 x 5	4 x 6	4 x 7	4 x 8	4 x 9	4 x 10	4 x 11	4 x 12
5 x 1 1 x 5	5 x 2 2 x 5	5 x 3 3 x 5	5 x 4 4 x 5	5 x 5	5 x 6	5 x 7	5 x 8	5 x 9	5 x 10	5 x 11	5 x 12
6 x 1 1 x 6	6 x 2 2 x 6	6 x 3 3 x 6	6 x 4 4 x 6	6 x 5 5 x 6	6 x 6	6 x 7	6 x 8	6 x 9	6 x 10	6 x 11	6 x 12
7 x 1 1 x 7	7 x 2 2 x 7	7 x 3 3 x 7	7 x 4 4 x 7	7 x 5 5 x 7	7 x 6 6 x 7	7 x 7	7 x 8	7 x 9	7 x 10	7 x 11	7 x 12
8 x 1 1 x 8	8 x 2 2 x 8	8 x 3 3 x 8	8 x 4 4 x 8	8 x 5 5 x 8	8 x 6 6 x 8	8 x 7 7 x 8	8 x 8	8 x 9	8 x 10	8 x 11	8 x 12
9 x 1 1 x 9	9 x 2 2 x 9	9 x 3 3 x 9	9 x 4 4 x 9	9 x 5 5 x 9	9 x 6 6 x 9	9 x 7 7 x 9	9 x 8 8 x 9	9 x 9	9 x 10	9 x 11	9 x 12
10 x 1 1 x 10	10 x 2 2 x 10	10 x 3 3 x 10	10 x 4 4 x 10	10 x 5 5 x 10	10 x 6 6 x 10	10 x 7 7 x 10	10 x 8 8 x 10	10 x 9 9 x 10	10 x 10	10 x 11	10 x 12
11 x 1 1 x 11	11 x 2 2 x 11	11 x 3 3 x 11	11 x 4 4 x 11	11 x 5 5 x 11	11 x 6 6 x 11	11 x 7 7 x 11	11 x 8 8 x 11	11 x 9 9 x 11	11 x 10 10 x 11	11 x 11	11 x 12
12 x 1 1 x 12	12 x 2 2 x 12	12 x 3 3 x 12	12 x 4 4 x 12	12 x 5 5 x 12	12 x 6 6 x 12	12 x 7 7 x 12	12 x 8 8 x 12	12 x 9 9 x 12	12 x 10 10 x 12	12 x 11 11 x 12	12 x 12

Multiplication Combinations (page 3 of 6)

A helpful way to learn multiplication combinations is to think about one category at a time. Here are some categories you may have seen before. You probably already know many of these combinations.

Learning the ×1 combinations

You may be thinking about only one group.

1 group of 9 equals 9

 → 1 x 9 = 9

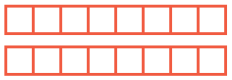
You may also be thinking about many groups of 1.

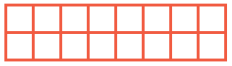
6 groups of 1 equal 6

 → 6 x 1 = 6

Learning the ×2 combinations

Multiplying by 2 is the same as doubling a number.

 → 8 + 8 = 16

 → 2 x 8 = 16

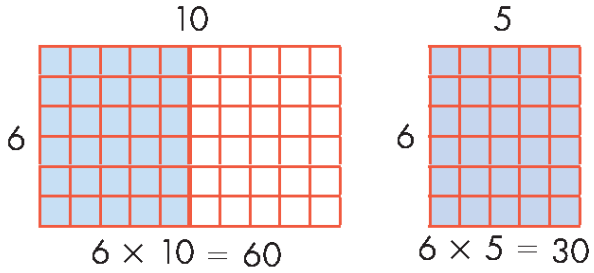
Learning the ×10 and ×5 combinations

You can learn these combinations by skip counting by 10s and 5s.

10, 20, 30, 40, 50, 60 → 6 x 10 = 60

5, 10, 15, 20, 25, 30 → 6 x 5 = 30

Another way to find a ×5 combination is to remember that it is half of a ×10 combination.



6 x 5 (or 30) is half of 6 x 10 (or 60).

Multiplication Combinations (page 4 of 6)

Here are some more categories to help you learn the multiplication combinations.

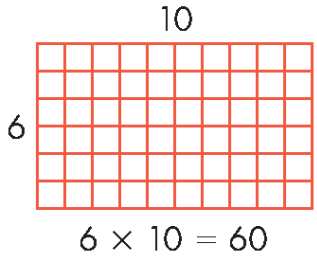
Learning the ×11 Combinations

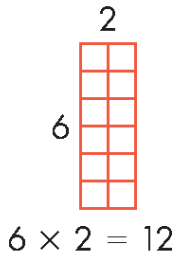
Many students learn these combinations by noticing the double-digit pattern they create.

11	11	11	11	11
x 3	x 4	x 5	x 6	x 7
33	44	55	66	77

Learning the ×12 Combinations

Many students multiply by 12 by breaking the 12 into 10 and 2.



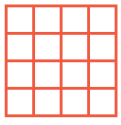


6 x 12 = (6 x 10) + (6 x 2)
6 x 12 = 60 + 12
6 x 12 = 72

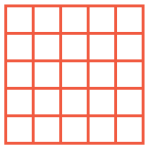
Learning the Square Numbers

Many students remember the square number combinations from experiences building the squares with tiles or drawing them on grid paper.

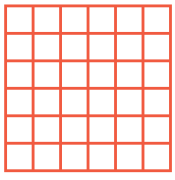
3
x 3
9



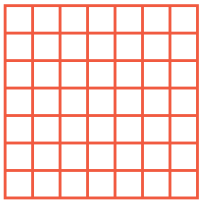
4
x 4
16



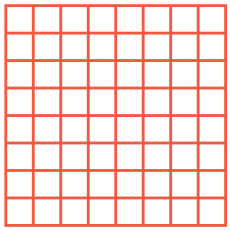
5
x 5
25



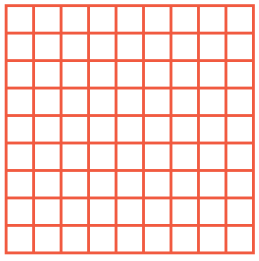
6
x 6
36



7
x 7
49



8
x 8
64



9
x 9
81

Multiplication Combinations (page 5 of 6)

After you have used all these categories to practice the multiplication combinations, you have only a few more to learn.

1 x 1	1 x 2	1 x 3	1 x 4	1 x 5	1 x 6	1 x 7	1 x 8	1 x 9	1 x 10	1 x 11	1 x 12
2 x 1	2 x 2	2 x 3	2 x 4	2 x 5	2 x 6	2 x 7	2 x 8	2 x 9	2 x 10	2 x 11	2 x 12
3 x 1	3 x 2	3 x 3	3 x 4	3 x 5	3 x 6	3 x 7	3 x 8	3 x 9	3 x 10	3 x 11	3 x 12
4 x 1	4 x 2	4 x 3 3 x 4	4 x 4	4 x 5	4 x 6	4 x 7	4 x 8	4 x 9	4 x 10	4 x 11	4 x 12
5 x 1	5 x 2	5 x 3	5 x 4	5 x 5	5 x 6	5 x 7	5 x 8	5 x 9	5 x 10	5 x 11	5 x 12
6 x 1	6 x 2	6 x 3 3 x 6	6 x 4 4 x 6	6 x 5	6 x 6	6 x 7	6 x 8	6 x 9	6 x 10	6 x 11	6 x 12
7 x 1	7 x 2	7 x 3 3 x 7	7 x 4 4 x 7	7 x 5	7 x 6 6 x 7	7 x 7	7 x 8	7 x 9	7 x 10	7 x 11	7 x 12
8 x 1	8 x 2	8 x 3 3 x 8	8 x 4 4 x 8	8 x 5	8 x 6 6 x 8	8 x 7 7 x 8	8 x 8	8 x 9	8 x 10	8 x 11	8 x 12
9 x 1	9 x 2	9 x 3 3 x 9	9 x 4 4 x 9	9 x 5	9 x 6 6 x 9	9 x 7 7 x 9	9 x 8 8 x 9	9 x 9	9 x 10	9 x 11	9 x 12
10 x 1	10 x 2	10 x 3	10 x 4	10 x 5	10 x 6	10 x 7	10 x 8	10 x 9	10 x 10	10 x 11	10 x 12
11 x 1	11 x 2	11 x 3	11 x 4	11 x 5	11 x 6	11 x 7	11 x 8	11 x 9	11 x 10	11 x 11	11 x 12
12 x 1	12 x 2	12 x 3	12 x 4	12 x 5	12 x 6	12 x 7	12 x 8	12 x 9	12 x 10	12 x 11	12 x 12

As you practice all of the multiplication combinations, there will be some that you "just know" and others that you are "working on" learning.

One way to practice a combination that is hard for you is to make a Multiplication Clue Card. Think of a combination you already know that you can start with to help you learn the harder one.

You will make your own Multiplication Cards for combinations that are hard for you.

On the next page are examples of Multiplication Cards made by students to help them learn 7×8 and 8×7.

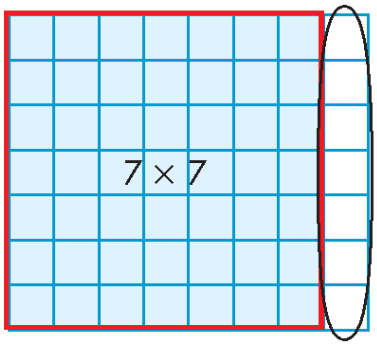
7×8
8×7

Start with _____

Multiplication Combinations (page 6 of 6)

Like many fourth graders, these students think that 7×8 is a hard multiplication combination to learn. Each of these students has a different strategy to solve 7×8. They use a multiplication combination that they know to help them solve 7×8.

Neomi: *I would do 7×7 and then add 7.*

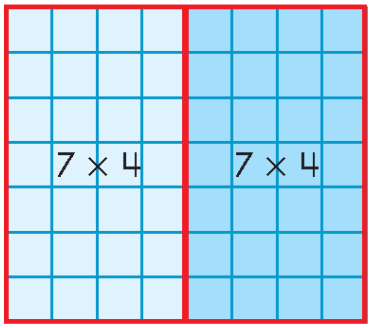


$$\begin{array}{r} 49 \\ +\ 7 \\ \hline 56 \end{array}$$

7×8
8×7

Start With 7×7 Neomi

Alejandro: *I would double a 7 by 4 array to make 7×8.*



$$\begin{array}{r} 7 \\ \times\ 4 \\ \hline 28 \end{array}$$

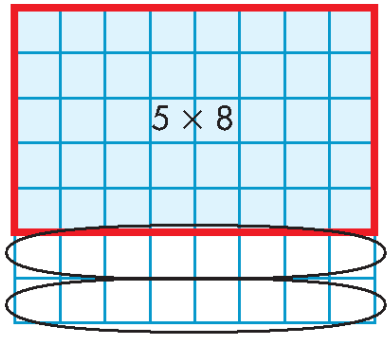
$20 + 20 + 8 + 8 = 56$

$40 + 16 = 56$

7×8
8×7

Start With 7×4 Alejandro

Ramona: *I think of it as seven 8s. I would start at 5×8 and keep skip counting by 8s.*



$5 \times 8 = 40$

$40 + 8 = 48$

$48 + 8 = 56$

7×8
8×7

Start With 5×8 Ramona

Close to 1000

Materials

- One deck of Numeral Cards
- Close to 1000 Score Sheet for each player

Players: 2

How to Play

1. Deal out eight Numeral Cards to each player.

2. Use any six cards to make two numbers. For example, a 6, a 5, and a 2 could make 652, 625, 526, 562, 256, or 265. Wild cards can be used any numeral. Try to make two numbers that, when added, give you a total that is close to 1000.

3. Write these numbers and their total on the Close to 1000 Score Sheet. For example: 652 + 347 = 999.

4. Find your score. Your score is the difference between your total and 1000.

5. Put the cards you used in a discard pile. Keep the two cards you didn't use for the next round.

6. For the next round, deal six new cards to each player. Make more numbers that come close to 1000. When you run out of cards, mix up the discard pile and use them again.

7. After five rounds, total your scores. The lower score wins.

Scoring variation Write the score with plus and minus signs to show the direction of your total away from 1000. For example: if your total is 999, your score is -1. If you total is 1005, your score is +5. The total of these two scores would be +4. Your goal is to get a total score for five rounds that is close to 0.

Close to 1000 Score Sheet

Game 1										Score
Round 1:	___	___	___	+	___	___	___	=	_____	_____
Round 2:	___	___	___	+	___	___	___	=	_____	_____
Round 3:	___	___	___	+	___	___	___	=	_____	_____
Round 4:	___	___	___	+	___	___	___	=	_____	_____
Round 5:	___	___	___	+	___	___	___	=	_____	_____
									Total Score	_____

Game 2										Score
Round 1:	___	___	___	+	___	___	___	=	_____	_____
Round 2:	___	___	___	+	___	___	___	=	_____	_____
Round 3:	___	___	___	+	___	___	___	=	_____	_____
Round 4:	___	___	___	+	___	___	___	=	_____	_____
Round 5:	___	___	___	+	___	___	___	=	_____	_____
									Total Score	_____

0	0	1	1
0	0	1	1
2	2	3	3
2	2	3	3

4	4	5	5
4	4	5	5
6	6	7	7
6	6	7	7

8	8	9	9
8	8	9	9
WILD CARD	WILD CARD		
WILD CARD	WILD CARD		

Close to 0

Materials

- One deck of Numeral Cards
- Close to 0 Score Sheet for each player

Players: 1, 2, or 3

How to Play

1. Deal out eight Numeral Cards to each player.

2. Use any six cards to make two numbers. For example, a 6, a 5, and a 2 could make 652, 625, 526, 562, 256, or 265. Wild cards can be used any numeral. Try to make two numbers that, when subtracted, give you a difference that is close to 0.

3. Write these numbers and their difference on the Close to 0 Score Sheet. For example: 652 - 647 = 5. The difference is your score.

4. Put the cards you used in a discard pile. Keep the two cards you didn't use for the next round.

5. For the next round, deal six new cards to each player. Make two more numbers with a difference close to 0. When you run out of cards, mix up the discard pile and use them again.

6. After five rounds, total your scores. The lower score wins.

Close to 0 Score Sheet

Game 1 Score

Round 1: ___ ___ ___ - ___ ___ ___ = _____ _____

Round 2: ___ ___ ___ - ___ ___ ___ = _____ _____

Round 3: ___ ___ ___ - ___ ___ ___ = _____ _____

Round 4: ___ ___ ___ - ___ ___ ___ = _____ _____

Round 5: ___ ___ ___ - ___ ___ ___ = _____ _____

Total Score _____

Game 2 Score

Round 1: ___ ___ ___ - ___ ___ ___ = _____ _____

Round 2: ___ ___ ___ - ___ ___ ___ = _____ _____

Round 3: ___ ___ ___ - ___ ___ ___ = _____ _____

Round 4: ___ ___ ___ - ___ ___ ___ = _____ _____

Round 5: ___ ___ ___ - ___ ___ ___ = _____ _____

Total Score _____

The Sum What Dice Game

Why

To practice basic addition facts and mental arithmetic

Materials

- 2 Dice
- Playing strips
- Beans, pennies, or other markers, or
- Pencil and paper

How to Play

1. Give a playing strip to each player or have each person write out the numerals 1 through 9 on paper.

1	2	3	4	5	6	7	8	9

2. Players take turns rolling two dice.

3. On each turn, the players may cover either the sum rolled on the dice or any two numbers that are still uncovered and that add to the sum rolled.
   For example, if a sum 9 is rolled first, the player may cover: 9, or 1 and 8, or 2 and 7, or 3 and 6, or 4 and 5.

4. Later in the game if the sum of 9 is rolled again and the 5 is already covered, then the player cannot use the 4 and 5 combination and must play one of the other open possibilities.

5. When a player cannot play, he or she is out and has a score of the sum of the uncovered numbers.

6. Play continues for everyone else until everyone is out.

7. The last person to go out will not necessarily win; the person with the lowest score wins.

1	2	3	4	5	6	7	8	9

1	2	3	4	5	6	7	8	9

1	2	3	4	5	6	7	8	9

Multiplication Mix-Up

The table shown below is a “scrambled” multiplication table.
The columns and the rows have been moved around to different positions.
Use your knowledge of the multiplication facts and some good reasoning
to fill in all the blank squares.

X		8				3				7
	12									
6				30						42
				25						
9					81				18	
	6			5				4		
						30				
	18			15			3			
4										
								32		

YOU GRADE IT

How did Bobbie Marks do on this test? Place a C by each correct answer.
Place a ✓ by each wrong answer and write in the correct answer.

Computation Test

Bobbie Marks
_____
name

1. 504
-- 276
218

2. 34
59
23
+78
194

3. 287
x 4
1248

4. $ 5.75
3.37
+ 6.25
15.37

5. 6,572
834
+8,209
15,615

6. 435 + 0.7 + 2.65
435
0.7
2.65
4 3 7.35

7. $45 – 13.75
$45.00
13.75
$31.25

8. 300 x 20 x 200
300
20
60000
200
12,000,000

9. Write in standard form:
sixty-three billion one hundred thirty-seven million
eight hundred twenty-four thousand five
63,137,824,500

NUMBER PATTERNS

Find each pattern.
Fill in the missing numbers.

1. 7 - 17 - ___ - ___ - 47 - ___ - ___ - ___

2. ___ - ___ - 24 - 32 - ___ - 48 - ___ - ___

3. 1 - 4 - ___ - 16 - ___ - ___ - ___ - ___

4. ___ - 135 - ___ - ___ - 150 - ___ - ___ - ___

5. 12 - 23 - ___ - ___ - ___ - ___ - 78 - ___

6. 1 - 8 - 27 - ___ - ___ - ___ - ___ - ___

7. 08 - 17 - ___ - 35 - ___ - ___ - 62 - ___

8. 64 - ___ - 100 - ___ - ___ - ___ - ___ - 225

9. 1 - 1 - ___ - 3 - 5 - ___ - 13 - ___

How Close Can You Get?

1. Cut out the squares below.
   Arrange the digits to make a number the rounds to 50.
   Record your number _____.
   Explain why your number rounds to 50.

2. Now rearrange the digits to make at least two other numbers that round to 50. Record each number.

3. Choose one of the numbers you have made.
   Write it in words, using whole numbers and decimal place values.

4. Compare the decimals you have made.
   Which one is closest to 50? Explain how you know.

•	**0**	**4**	**3**	**5**	**7**	**9**

1. Complete

a. 70 x 800 = _____

b. 400 x 5,000 = _____

c. 6,300 = _____ x 90

d. 21,000 = 70 x _____

e. 720,000 = 800 x _____

2. a. Pencils are packed 18 to a box. How many pencils are there In 9 boxes?

_____
(unit)

b. Explain how you solved the problem.

_____

_____

3. Complete the table.

Fraction	Decimal	Percent
$\frac{3}{5}$		
		25%
	0.50	
$\frac{7}{10}$		
$\frac{85}{100}$		85%

4. a. Write a 5-digit number with
5 in the hundredths place,
8 in the tens place,
0 in the ones place,
3 in the thousandths place,
and 4 in the tenths place.

_____

b. Write this numeral in words.

_____

_____

5. Circle the numbers below that are divisible by 3.

221 381 474 922 726

6. Round 3,045,832 in the nearest….

a. million _____

b. thousand _____

c. ten-thousand _____

1. Write **<** or **>**.

a. 0.5 _____ 1.0

b. 3.2 _____ 3.02

c. 4.83 _____ 4.8

d. 6.25 _____ 6.4

e. 0.7 _____ 0.07

2. Round each number to the nearest ten-thousand.

a. 92,856 _____

b. 108,325 _____

c. 5,087,739 _____

d. 986,402 _____

e. 397,506 _____

3. Subtract. Show your work.

a. 105 – 59 = _____

b. 2,005 – 189 = _____

c. 680 – 74 = _____

d. 3,138 – 809 = _____

4. List all of the factors of 36.

_____

_____

5. Math class is dismissed at 2.20 P.M. It is 1:53 P.M. How many more minutes before math class is dismissed?

_____
(unit)

1. I have four sides. All opposite sides are parallel. I have no right angles.

a. Draw me in the space below.

b. I am called a _____.

2. Write **<** or **>**.

a. 0.45 _____ $\frac{3}{4}$

b. 0.89 _____ $\frac{8}{10}$

c. $\frac{4}{5}$ _____ 0.54

d. $\frac{1}{3}$ _____ 0.35

e. $\frac{7}{8}$ _____ 0.9

3. Complete each pattern.

a. 25, _____, 61, _____

b. 87, _____, 43, _____

c. 21, _____, 49, _____

d. 64, _____, _____, _____, 32

e. 61, _____, _____, _____ 81

4. Solve

	Solution
a. $23 + X = 60$	$X =$ _____
b. $36 = p * 4$	$p =$ _____
c. $200 = 50 * m$	$m =$ _____
d. $55 + t = 70$	$t =$ _____
e. $28 - b = 13$	$b =$ _____

5. Add

a. 632 + 859

b. 2.24 + 3.85

c. 1,902 + 478

d. 3,341 + 799

e. 1,654 + 2,020

How to Play the Digits Game

Materials

- One deck of Numeral Cards (with Wild Cards removed)
- Digits Game Score Sheet for each player

Players: 2 or 3

How to Play

1. Decide on the target number to use.

   Example: The target number is 1000.

2. Deal the Numeral Cards. Deal out one more card than there are digits in the target.

   Example: The target number has 4 digits, so you deal out 5 cards: 3, 8, 0, 1, and 5.

3. Players use the numerals on the cards to make a number as close as possible to the target.

   Example: You can use 3, 8, 0, 1, and 5 to make 1035, 853, or other numbers.

4. Write the target and the number you made on your score sheet. Find and record the difference between them.

   Example: 1000 – 853 = 147. The difference is your score

5. When everyone has finished, compare answers. Which number is closest to the target? Is it possible to make a number even closer?

   Example: Player A made 853. Player B made 1305. Who is closer? Can you make a number with these digits that is even closer to 1000?

6. For the next round, mix up all the cards and deal a new set.

7. After three rounds, total your scores. Lowest total wins.

Digits Game Score Sheet

For each round you play, record the target number and the closest number you can make with your digits. Put the larger one first. Then find and record the difference between them.

Game 1 target: _____ Difference

Round 1: _____ -- _____ = _____

Round 2: _____ -- _____ = _____

Round 3: _____ -- _____ = _____

Game 2 target: _____ Difference

Round 1: _____ -- _____ = _____

Round 2: _____ -- _____ = _____

Round 3: _____ -- _____ = _____

Game 3 target: _____ Difference

Round 1: _____ -- _____ = _____

Round 2: _____ -- _____ = _____

Round 3: _____ -- _____ = _____

1. Look around the room and find an example of each of the following:

   a. parallelogram _____

   b. a square _____

   c. a circle _____

   d. a polygon with more than 4 sides _____

   e. a cube _____

2. Subtract. Do not use a calculator

a.	b.	c.	d.	e.
1,924	7,431	1,493	322	602
-- 385	-- 5,555	-- 208	-- 199	-- 483

3. Write five names for the number 23.

   a. _____

   b. _____

   c. _____

   d. _____

   e. _____