



Fun with Multiplication

Work alone or with a partner. Roll a die. Place that number of small mats on the table. Roll the die again. Place that many objects on each mat. How many objects are there in all? Record your answer in two different ways.

Take five more turns and record each.

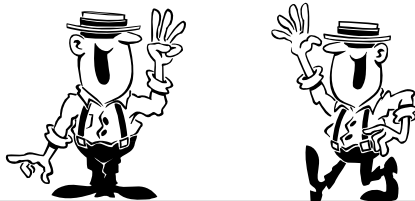
(1.03a)



Writing About Math

How are three groups of five different from five groups of three?

Use words and pictures to explain.



(1.03a)



Let's Explore

Some families were riding bicycles and tricycles in the park. If there were 27 wheels, how many bicycles and tricycles could have been in the park?

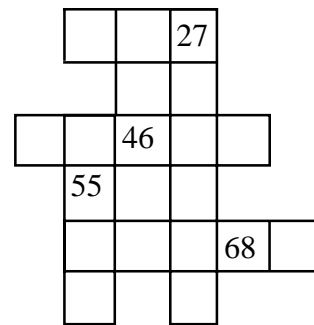


(1.03a, 1.06)



Seeing Math

Fill in the missing numbers on this piece of a hundred board.



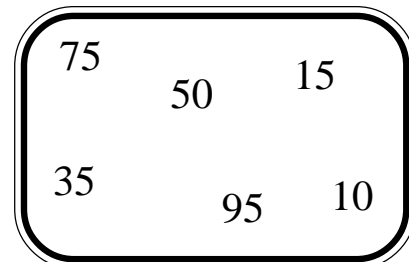
(5.01)



Let's Find Out

What do these numbers have in common?

Find more than one thing they share.



(5.01)

CORN SHUCKS!

(3 to 8 players)

You will need

4 number cubes
paper and pencil



Game rules

1. The first player tosses all four cubes and makes the largest possible four-digit number with those digits. Suppose the cubes show these digits: 3, 4, 6, 3. This order (6433) makes the largest possible number for those digits. The player writes that number at the bottom of a sheet of paper.



2. The next player tosses all four cubes and makes the smallest possible number for those digits. The player writes that number at the top of the same sheet of paper.

3. The third player tosses all four cubes and must make a number between the other two. If the player cannot, he or she says "**Shucks**" and is out of the game. If the player can, he or she writes the number between the first and last numbers.

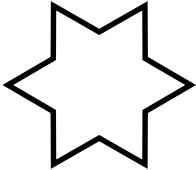
4. The next player tosses the cubes and must also make a number between the first and the last number. It should be written so that all the numbers on the paper are in order from top to bottom. If the player cannot make a number between the largest and smallest, or if he or she writes the number so that the numbers are not in order from top to bottom, the player says "**Shucks**" and is out of the game.

5. The players continue taking turns until only one person is left in the game. That player is the winner.

(1.01b, 1.01c)



Keeping Skills Sharp

1. $6 + 4$ 2. $10 - 3$ 3. $42 + 38$
4. How much money is five dimes and five nickels?
5. Draw a line of symmetry for this figure:

6. How many faces does a cube have?
7. What number is eight tens, two hundreds, and four ones?
8. Mrs. Wilson needs twenty-six pumpkins for her class. She already has eighteen pumpkins. How many more does she need to buy?



Solve this!

Kenny wants to buy a book that costs \$3. He can save 25¢ a week. How many weeks will he need to save to have enough money to buy the book? Explain your thinking.



(1.03a, 1.06)

To the Teacher ..

Fun with Multiplication:

Mats provide students with a way to see groups. Mats might be construction paper circles, small paper plates, margarine tub lids, etc. Recording needs to show repeated addition and multiplication (ex. Four groups of three = $3 + 3 + 3 + 3$). Some students may express it as 4×3 , but they need to understand that this is four groups or sets of three.

Seeing Math:

Students need many experiences working with hundred boards as they discover numerical patterns throughout the board. How do numbers in a row relate to each other? (one more, one less) How do numbers in a column relate? (ten more, ten less) How do numbers relate diagonally? (11 more, 11 less) These activities help students develop number sense.

Let's Find Out:

This open-ended activity might have student responses such as: all are two digit numbers, all end in five or zero, all are less than 100, all have an odd number of tens.

Let's Explore:

(five tricycles, six bicycles) Possible strategies for solving include manipulatives for modeling, constructing a chart, and guess and check. Encourage students to share their strategies.

	1	2	3	4	5	6
tricycle	3	6	9	12	15	18
bicycle	2	4	6	8	10	12

Keeping Skills Sharp:

This weekly session provides teachers with opportunities for assessment as they make notes on students' work and reteaching as they check answers. (see number six)

Suggested Literature:

Amanda Bean's Amazing Dream, Neuschwander;
The Doorbell Rang, Pat Hutchins

Mental Math

Directions to Students: Number your paper from 1 to 8. Write your answers as the questions are called out. Each question will be repeated only once.

$9 + 5$

$8 + 2 - 1 - 2$

number of legs on five roosters

one hundred, three tens,
four ones

What comes next . . . 90, 85, 80, ___?

10 less than 84

value of a quarter and three nickels

number of minutes in an
hour

Keeping Skills Sharp

10

answers
will vary

7

six
faces

80

284

75¢

eight



Fun with Multiplication

Draw a picture to illustrate this problem:
Susan bought seven sheets of stickers.
Each sheet had five stickers.
How many stickers did she have?

(1.03a, 1.06)



Writing About Math

How can you show someone that this is a true or false number sentence?

$$\frac{1}{2} + \frac{2}{3} > 1$$

(1.05d)



Let's Explore

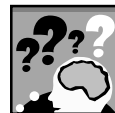
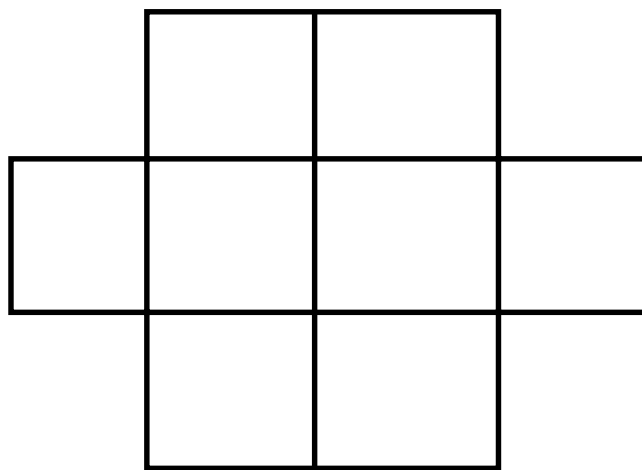
Think of an item that comes in groups.
(Ex. wheels on a car, ears on a cat)
Draw several groups of your item.
Describe your picture and tell
the total number of items.



Seeing Math

(1.01c, 1.06)

Place numbers 1 to 8 in the squares so that no number touches a number that comes before or after it (either horizontally, vertically or on the diagonal).

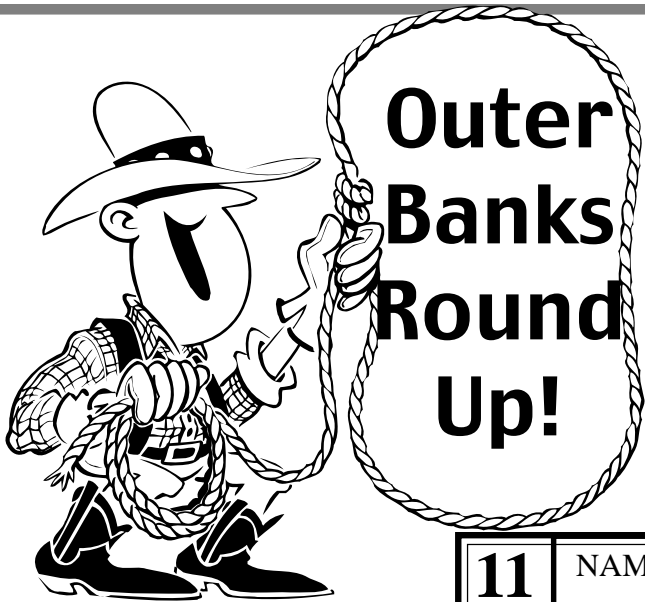


Let's Find Out

A fox, a duck, and a bag of corn were to be taken across a river by a farmer. Only the farmer and one other thing will fit in the boat. If left alone, the fox will eat the duck and the duck will eat the corn. How can the farmer get them all across safely?



(1.06)



Outer Banks Round Up!

Remove aces and face cards from a regular deck of cards. Shuffle cards. Players will draw one card and subtract from the target number given on their game sheet. Record the answers on the game sheet.

14	NAME	NAME
GAME		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

11	NAME	NAME
GAME		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

15	NAME	NAME
GAME		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

The winner is the player who has the lowest total score for the ten rounds.



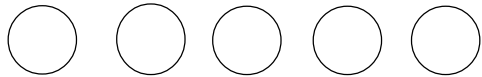
(Subtraction review)



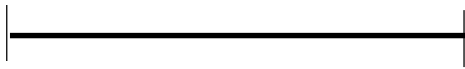
Keeping Skills Sharp

1. $2 + \square = 10$ 2. $11 - 7 = \square$ 3. $54 + 8 = \square$

4. If I have exactly 26¢, what coins must these be?



5. How long, in centimeters, is this line?



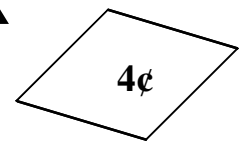
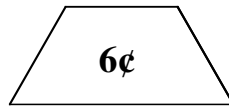
6. Draw a line that is four centimeters long.

7. twelve ones + seven tens

8. Eight children had ice cream cones.
Each cone had two scoops.
How many scoops in all?



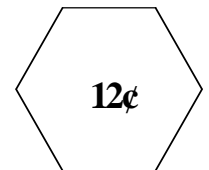
Solve this!



Using the pattern blocks shown, make a picture that is worth 78¢.

Record your picture. Design a chart to show how many of each block you used.

Make a different picture that is worth 78¢. Record this picture, and write on the chart the blocks you used.



If the triangle is worth 2¢, why do you think the hexagon is worth 12¢ ?

(1.06)

To the Teacher ..

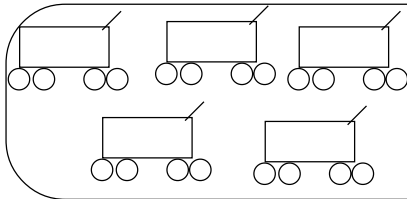
Seeing Math:

This is one possible solution.
Post the solutions discovered by students.

	3	5	
7	1	8	2
	4	6	

Let's Explore:

Discuss items that come in groups and have students brainstorm some. (ex. eight markers in a box, three wheels on a tricycle, five players on a basketball team, five fingers on a hand, six sides on a hexagon). The following is an example of a completed task. A class book could be made to illustrate the different groups.



There are five wagons. Each wagon has four wheels. There are twenty wheels altogether.

Suggested Literature:

What Comes in 2's, 3's and 4's - S. Aker

Too Many Kangaroo Things To Do - Stuart Murphy

Mental Math

Directions to Students: Number your paper from 1 to 8. Write your answers as the questions are called out. Each question will be repeated only once.

$18 - 9$

$6 + 4 - 2 + 3$

number of sides on three triangles

three hundreds and six tens

What comes next . . . 43, 53, 63, ___?

100 more than 245

value of five dimes, two nickels, and four pennies

number of weeks in a year

Keeping Skills Sharp

8

6 cm

4

see directions

62

82

10, 5, 5, 5, 1¢

16



Fun with Multiplication

How many square units are in a complete set of pentominoes?

How did you find out?

(2.01)



Writing About Math

How is a dime like a clock?
 How is a chalkboard like a door?
 How is a book like a box?

(3.01)



Let's Explore

What's Your Shape?

Work with a partner. Using a metric tape measure, record each other's height in centimeters. Then, measure and record each other's arm span (from fingertip to fingertip) with arms outstretched. If your height and arm span are about the same, you are a square. If your height is greater, you are a tall rectangle. If your arm span is greater, you are a wide rectangle.

Are members of your family the same shape as you?
 How could you find out?

(2.01b)



Seeing Math

A. _____

B. _____

C. _____

D. _____

E. _____

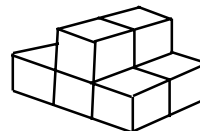
Estimate the length of each line segment in centimeters. Measure and record.

(2.01b)

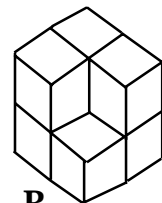


Let's Find Out

How many cubes are needed to build each figure?



A



B

How do you know?

(3.01)

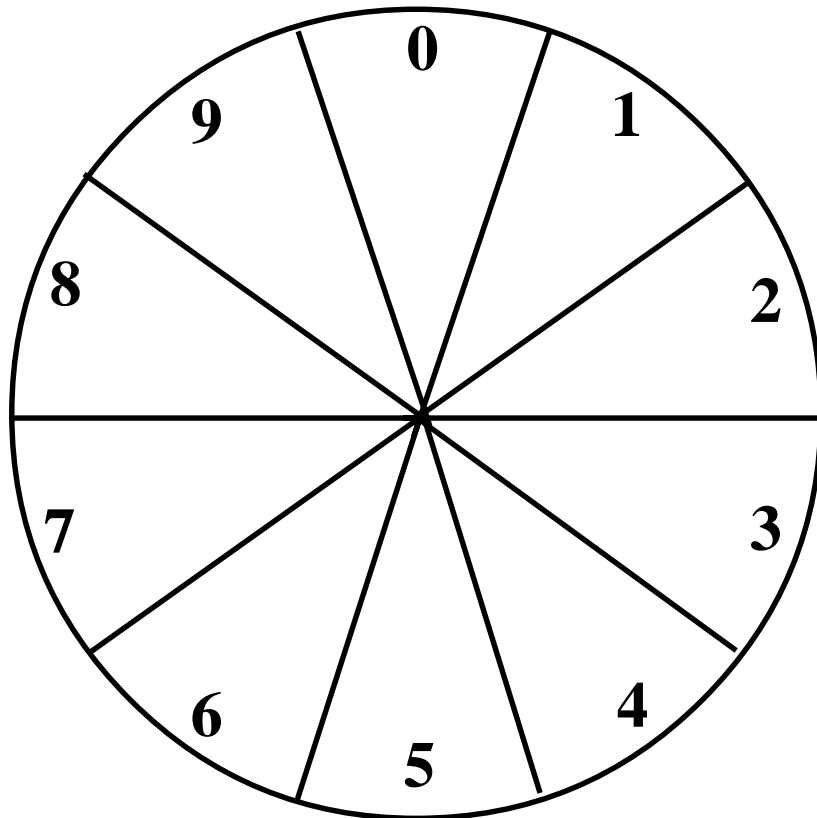
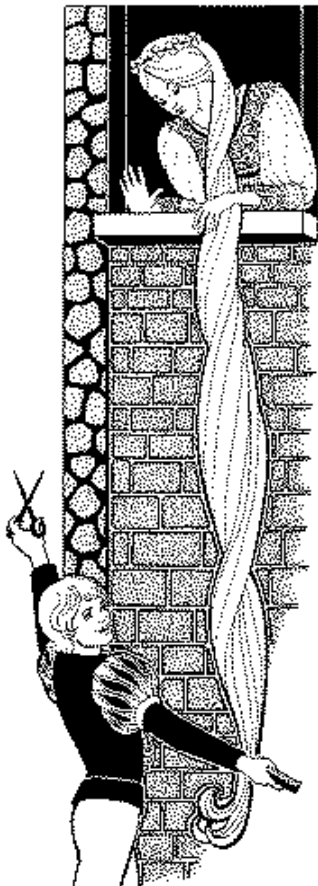
Close Enough

Players: Two or three

Materials: Pencil and paper clip for spinner, base ten blocks, recording sheet for each player (see Blacklines).

Directions:

1. A player spins and takes either that number of ones, ten rods, or hundred flats.
2. The player records the number on his chart (Ex. a spin of 4 may be four ones and recorded as 4, four ten rods and recorded as 40, or four hundred flats and recorded as 400.)
3. Players take turns spinning and recording their numbers.
4. After six spins, the player with numeration blocks closest to 1000 but not more than 1000 wins the game.



(1.01b)

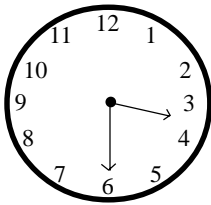


Keeping Skills Sharp

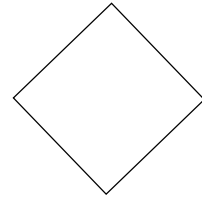
1. $\square + 3 = 10$ 2. $9 - 4$ 3. $16 + 29$

4. If you buy a stamp for 35¢ and pay with two quarters, how much change should you get?

5. What time is 20 minutes after this?



6. Draw the whole if this is one-third.



7. Three hundreds and fourteen tens

8. Mel has 38 tapes. Jo has 29 tapes.
Together they have 12 more than Gene.
How many does Gene have?



Solve this!

(1.06)

Write story problems whose answers are the numbers from 1 to 31.

Use index cards to record each problem separately. Make a class calendar with the most interesting problems. Record them on the appropriate date.

Example:

The number of fingers
on one hand.
Answer: five

This would be put on the fifth
day of the month.



To the Teacher ..

Fun with Multiplication: 60

Seeing Math:

A = two cm B = six cm C = three cm D = eight cm E = five cm

Let's Find Out:

A eight, B seven

Suggested Literature:

Flat Stanley by J. Brown

The Greedy Triangle by Marilyn Burns

Mental Math

Directions to Students: Number your paper from 1 to 8. Write your answers as the questions are called out. Each question will be repeated only once.

12 - 7

9 + 2 + 3 - 4

number of wheels on three cars

five hundreds and six ones

What comes next. . . 96, 98, 100__?

100 less than 453

value of two quarters, four dimes, and one penny

number of dimes in a dollar

Keeping Skills Sharp

7

3:50

5

answers will vary

45

440

15¢

55



Fun with Multiplication

If you were to color every fourth number on a hundred board, beginning with the number 4, what is the twelfth number you would color? Describe the patterns you see on the hundred board.

(1.03a, 5.01)



Writing About Math

Write a story to illustrate the number sentence:

$$3 \times 4 = 12$$



(1.06)



Let's Explore

These are the blocks needed to make one star.



Number of Stars	Number of Triangles	Number of Hexagons
1	6	1
2	12	2
3		
4		

How many triangles and hexagons will you need to make four stars? How did you figure this out?

(1.03a, 1.06)



Seeing Math

If this pattern unit is continued, draw the sixth figure.



Draw the twenty-fifth figure.

Explain your thinking.

(1.03a, 5.02)



Let's Find Out

Donna's cat had her kittens in a basket. There are six more legs than ears in the basket.

How many kittens are in the basket? How do you know?



(1.03a, 1.06)

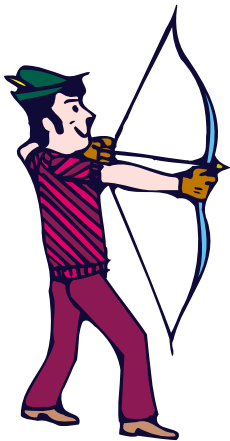


Keeping Skills Sharp

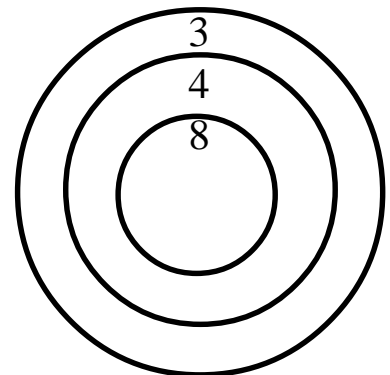
- $\square + 7 = 15$
- $13 - \square = 4$
- $145 + 32 = \square$
- If you want to buy apples for 55¢ each and you have eight dimes, how much more money do you need to buy two apples?
- Four coins are worth more than 50¢ and less than 60¢. What could they be?
- Two hours after 11:30 would be what time?
- 16 tens and 16 ones.
- Tina rode her bike twelve miles. Sol rode his bike nine miles. How many more miles does Tina need to ride if her goal is to ride twenty miles?



Solve this!



If Brian shot five arrows at this board and scored 26 points, where could his arrows have landed?



(1.06)

To the Teacher ..

Fun with Multiplication:

Blackline for hundred boards is available.

Seeing Math:



is sixth.



is twenty-fifth

Let's Find Out:

<i>Kittens</i>	<i>Ears</i>	<i>Legs</i>
1	2	4
2	4	8
3	6	12

Let's Explore:

Pattern blocks should be available for students who need them to visualize the pattern.

Problem Solver Special:

Two arrows on 8, one arrow on 4, two arrows on 3 = 26 points

Suggested Literature:

Each Orange Has Eight Slices by P. Giganti

Mental Math

Directions to Students: Number your paper from 1 to 8. Write your answers as the questions are called out. Each question will be repeated only once.

$9 + 6$

number of hands that ten children have

What comes next ...

100, 150, 200, ___?

value of one dollar, four dimes, and three pennies

$48 - 3 \times 8 - 1$

three hundreds, five tens, and four ones.

10 more than 146

number of nickels in a quarter.

Keeping Skills Sharp

8

answers will vary

9

1:30

177

176

30¢

eight