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Math Activities to Keep Students Sharp Over the Summer

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Math

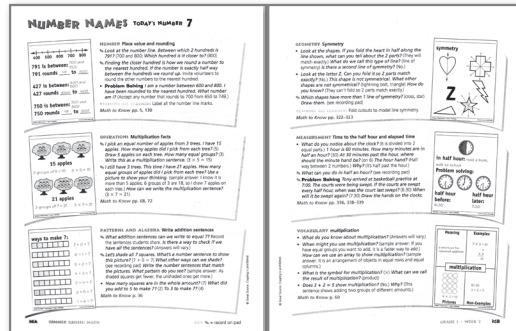
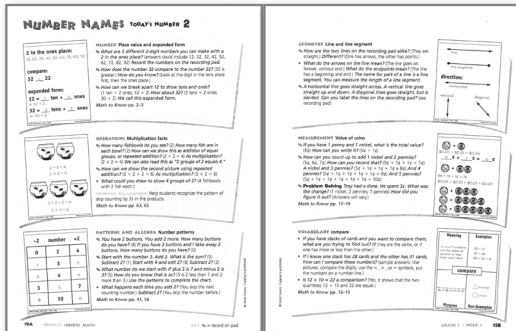


Summer Success® Math

Grade 3 Sample

Here are Number Names Activities you can use for students in Grade 3.

- Number Names activities reinforce concepts and help students identify patterns and connections.
- Whole-group instruction weaves together different math strands including basic number sense, basic operations, patterns and algebraic thinking, geometry, measurement, and vocabulary.



To see a full sample of Summer Success®: Math,
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Number Names Instruction

Number Names provides daily instruction covering five different math strands plus **Vocabulary. Problem Solving** is integrated throughout. Today's Number, unique to each day, is the connecting thread that ties the discussion together. For example, if Today's Number is 3, students may look at the number in terms of:

Number: What is the value of the 3 in these numbers?

Operations: What multiplication sentence shows how many petals are on 2 flowers?

Patterns and Algebra: How many triangle sides will be in the fifth row?

Geometry: How are the triangles different?

Measurement: What is the value of 1 dime and 3 pennies?

GET STARTED

- Choose a Number Names display area that allows students to sit as close as possible. Some teachers prefer to have the students sit on the floor or in chairs in front of the Number Names wall to focus their attention.
- Post the six Recording Pads and their labels, leaving a space for Today's Number.

DISCUSSION

- During each day's discussion, detailed in the Teacher's Edition, students consider questions displayed on the day's Recording Pads. Answers are collectively agreed upon and then written on the pads, providing a lasting representation of the concepts covered.
- Encourage students to interact with each other by listening to one another, sharing their reasoning, and respectfully questioning each other. To raise their level of thinking, follow up student responses with questions such as: *How do you know? How can we figure out if you're right? Does anyone else have another answer?*
- Reaching All Learners hints can help struggling students, including English Language Learners, who may benefit from another approach. References to the Great Source Math Handbook, *Math to Know*, follow each discussion strand and provide a resource for re-teaching.

3


Number

3 in tens or ones places:
answers could include 13, 23, 33, 43, 53, 63, 73, 83, 93, 30, 31, 32, 34, 35, 36, 37, 38, 39


order: *sample answer*
13 23 30 35 39


expanded form: *sample answers*
63 = 60 + 3
34 = 30 + 4
83 = 80 + 3

Vocabulary

Meaning	Examples
a logical grouping of things	used in our group: 8, 9, 10 small, medium, large grades: 3rd, 4th, 5th...
order	
	$3 \times 6 = 18$
Pictures	Non-Examples

Operations


1 group of 3 petals = 3
 $1 \times 3 = 3$


2 groups of 3 petals = 6
 $3 + 3 = 6$ $2 \times 3 = 6$


$3 \times 3 = 9$
 $4 \times 3 = 12$
 $5 \times 3 = 15$


Today's Number

Patterns and Algebra





row	pattern	sides
1	△	3
2	△△	6
3	△△△	9
4	△△△△	12
5	△△△△△	15
10	10 △s	30
100	100 △s	300

Measurement

$\$0.10$ $\$0.01$
 $10¢ + 1¢ =$

$\$0.11$ $11¢$



$10¢ + 2¢ = 12¢$
 $\$0.10 + \$0.02 = \$0.12$

 13¢ or \$0.13
 14¢ or \$0.14
 15¢ or \$0.15
Problem solving
 17¢ or \$0.17


Geometry

3-sided figures:

sample triangles



name: triangle



triangle: 3 sides, 3 angles, closed figure

NUMBER NAMES TODAY'S NUMBER 3

3 in tens or ones places:

answers could include 13, 23, 33, 43, 53, 63, 73, 83, 93, 30, 31, 32, 34, 35, 36, 37, 38, 39

order: sample answer

13 23 30 35 39

expanded form: sample answers

$$63 = 60 + 3$$

$$34 = 30 + 4$$

$$83 = 80 + 3$$

Number • Today's Number: 3 • Week 1: Wednesday

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NUMBER Place value for tens and ones

- What are 5 different 2-digit numbers you can make with a 3 in the tens or the ones place? (see recording pad) Use a tens and ones place value chart to list the numbers, if needed.
- What is the value of the 3 in each number? (Either 3 tens or 30, or 3 ones, depending on the number written.)
- ✎ How can we put these numbers in order from least to greatest? (Look at the tens first, then the ones.) Order 5 of the numbers.
- ✎ How can you write these numbers in expanded form? (example: $34 = 30 + 4$, or $34 = 3 \text{ tens} + 4 \text{ ones}$) Write 3 of the numbers in expanded form.

Math to Know pp. 2–3

1 group of 3 petals = 3

$$1 \times 3 = 3$$

2 groups of 3 petals = 6

$$3 + 3 = 6 \quad 2 \times 3 = 6$$

$$3 \times 3 = \underline{9}$$

$$4 \times 3 = \underline{12}$$

$$5 \times 3 = \underline{15}$$

Operations • Today's Number: 3 • Week 1: Wednesday

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OPERATIONS Multiplication facts

- ✎ How many petals are on 1 flower? (3) 1 group of 3 petals equals how many petals? (3) How do you write the multiplication sentence? ($1 \times 3 = 3$)
- ✎ How many petals are on 2 flowers? (6) What's the repeated addition? ($3 + 3 = 6$) Multiplication sentence? ($2 \times 3 = 6$)
- ✎ Complete the multiplication facts on the recording pad.
- What does multiplication mean? (repeated addition)

REACHING ALL LEARNERS Use diagrams to help students learn the multiplication facts for 3.

Math to Know pp. 63, 65, 68

row	pattern	sides
1		<u>3</u>
2		<u>6</u>
3		<u>9</u>
4		<u>12</u>
5		<u>15</u>
10	10	<u>30</u>
100	100	<u>300</u>

Patterns and Algebra • Today's Number: 3 • Week 1: Wednesday

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PATTERNS AND ALGEBRA Picture pattern

- ✎ What do you see on the pad? (numbers, words, triangles) What do you notice about the number of sides in each row? (sample answers: 3, 6, 9, 12; counting by 3s; adding 3 each time.) Is this a pattern? (Yes.) Why? (It keeps adding 3 so we can predict what comes next.)
- ✎ How many triangles are in the fifth row? (5) Number of sides? (15) How many triangles are in the 10th row? (10) Number of sides? (30) How come? (10 groups of 3 is 30.)
- ✎ How many triangles will be in the 100th row? (100) Number of sides? (300) How do you know? (100 groups of 3 is 300.)

Math to Know p. 16

GEOMETRY Triangles


- ✎ Draw 5 different shapes that have exactly 3 connected line segments for sides. The figure must be closed. How many corners, or angles, does each shape have? (3) What are shapes like these called? (triangles)
- How are the shapes alike? (sample answers: 3 straight sides, 3 angles, closed figures.) Different? (sample answers: length of the sides, angles look different.)
- ✎ Which shape on the pad is a triangle? (sample answer: fourth from the left.) How do you know? (sample answer: 3 sides, 3 angles, closed figure.) Loop the triangle.

REACHING ALL LEARNERS Provide a ruler, if needed.


Math to Know pp. 314–315

3-sided figures:

sample triangles



name: triangle



triangle: 3 sides, 3 angles, closed figure

Geometry • Today's Number: 3 • Week 1, Wednesday © 2014 Source: © Great Minds. All rights reserved.

MEASUREMENT Value of money and counting money

- ✎ If you have one dime and one penny, what is the total value? (11¢) How can you record that? ($10¢ + 1¢$)
- ✎ How do you count a dime and 2 pennies? (10¢, 11¢, 12¢) How can you record that? ($10¢ + 2¢$) Total value? (12¢) A dime and 3 pennies? ($10¢ + 3¢ = 13¢$) A dime and 4 pennies? ($10¢ + 4¢ = 14¢$) A dime and 5 pennies? ($10¢ + 5¢ = 15¢$)
- ✎ Is there another way to show 15¢? (see recording pad)
- ✎ **Problem Solving** How do I count a dime, a nickel, and 2 pennies? (10¢, 15¢, 16¢, 17¢) What is the total value? (17¢)

Math to Know pp. 17–19

$\$0.10$ $\$0.01$

$10 \text{ ¢} + 1 \text{ ¢} =$

$\$0.11$ 11 ¢

$10¢ + 2¢ = 12¢$
 $\$0.10 + \$0.02 = \$0.12$

$13¢$ or $\$0.13$

$14¢$ or $\$0.14$

$15¢$ or $\$0.15$

1D 1N; 1D 5P; 3N; 2N 5P; 1N 10P; 15P

Problem solving


$17¢$ or $\$0.17$

Measurement • Today's Number: 3 • Week 1, Wednesday © 2014 Source: © Great Minds. All rights reserved.

VOCABULARY order

- To put a group of things in order, what must you be able to do with them? (Compare them.) How? (sample answer: Find the number in between the others, or find which comes before and after; compare tens, then ones.)
- How might you put a group of numbers in order? (From least to greatest, or greatest to least.) What are some other examples of things that are ordered in some way? (see recording pad)
- Is $3 \times 6 = 18$ putting numbers in order? (No. It's a computation.)

Math to Know p. 14

Meaning	Examples
a logical grouping of things	ages in our group: 8, 9, 10 small, medium, large grades: 3rd, 4th, 5th ...
order	
	$3 \times 6 = 18$
Pictures	Non-Examples

Vocabulary • Today's Number: 3 • Week 1, Wednesday © 2014 Source: © Great Minds. All rights reserved.

NUMBER NAMES TODAY'S NUMBER 6

number value

- 630 6 hundreds/600
- 760 6 tens/60
- 621 6 hundreds/600

compare:

$$630 > 621 \quad 621 < 760$$

least to greatest:

$$621, 630, 760$$

NUMBER Place value, compare and order numbers

- ✎ What are 3 different numbers you can make that are less than 1,000 and have the digit 6 in the hundreds or tens place? (sample answers: 630, 760, 621) What is the value of the digit 6 in each number? (630 – 6 hundreds or 600; 760 – 6 tens or 60; 621 – 6 hundreds or 600.)
- ✎ How do the numbers compare? Use $<$ and $>$ to write 2 comparing statements. (sample answer: $630 > 621$; $621 < 760$) How did you know? (sample answer: I compared the value of the hundreds place first, then the tens place.)
- ✎ What's the order from least to greatest? (621, 630, 760)

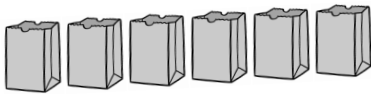
Math to Know pp. 5, 12–15



$$3 \text{ groups of } 2 = 6$$

$$2 + 2 + 2 = 6$$

$$3 \times 2 = 6$$



$$2 \times 3 = 6 \quad 3 \times 2 = 6$$

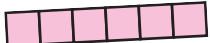
$$6 \times 1 = 6 \quad 1 \times 6 = 6$$

OPERATIONS Multiplication facts

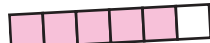
- ✎ Draw 2 circles in 3 bags. Tell this story, "I gave 2 marbles to 3 friends. How many did I give away?" (6) 3 groups of 2 marbles equal 6 marbles. Can you write this as repeated addition? ($2 + 2 + 2 = 6$) Multiplication sentence? ($3 \times 2 = 6$) How do you read it? (3 groups of 2 equal 6.)
- ✎ Let's use 6 counters again. Choose how many pockets to put an equal number of counters. How many equal groups of counters would you put in each pocket? (sample answers: 2 groups of 3 counters, or 3 groups of 2 counters; 6 groups of 1 counter, or 1 group of 6 counters.) Tell a story for your picture.

Math to Know p. 68

ways to make 6:



$$6 + 0 = 6$$



$$5 + 1 = 6$$



$$4 + 2 = 6$$



$$3 + 3 = 6$$



$$2 + 4 = 6$$



$$1 + 5 = 6$$

PATTERNS AND ALGEBRA Addition sentences

- ✎ What addition sentences can we write to equal 6? Record the sentences students share. Is there a way to check if we have all the sentences? (Answers will vary.)
- ✎ Let's shade all 6 squares. What's a number sentence to show this picture? ($6 + 0 = 6$) What other ways can we shade? (see recording pad) Write the number sentences that match the pictures. What pattern do you see? (sample answer: As shaded squares get fewer, the unshaded ones get more.)
- How many squares are in the whole amount? (6) What did you add to 5 to make 6? (1) To 3 to make 6? (3)

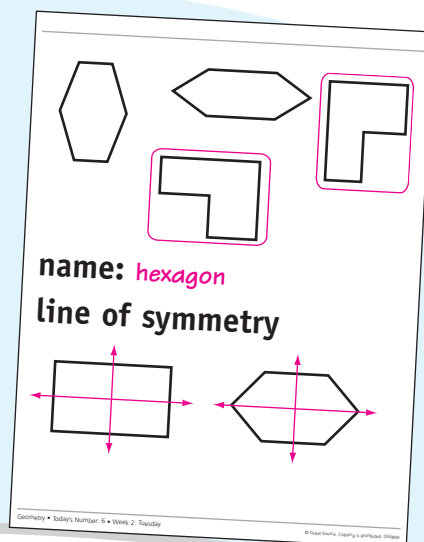
Math to Know p. 36

GEOMETRY Hexagons, congruence, and symmetry

- *How are these shapes alike?* (sample answers: polygons, closed figures, 6 sides/angles.) *What do we call these shapes?* (hexagons)
- ✎ *Figures with the same size and shape are congruent. Loop the congruent hexagons.* (see recording pad)
- ✎ *Can you draw a line so that two parts of the rectangle can match exactly? (Yes.) Draw the horizontal and vertical lines of symmetry. We call these the lines of symmetry.*
- ✎ *Is there a line of symmetry on the hexagon? (Yes.) Is there a second one? (Yes.) Draw them.* (see recording pad)

REACHING ALL LEARNERS Fold cutouts to show line symmetry.

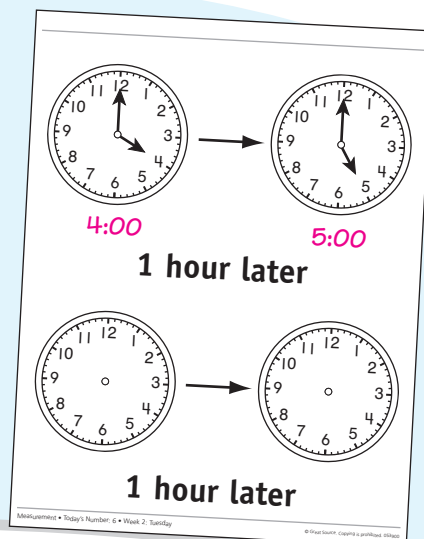
Math to Know pp. 311, 317, 322–323



MEASUREMENT Time to the hour and elapsed time

- ✎ *What time is shown on the clock?* (4 o'clock) *How do you know?* (The hour hand is pointing to 4, the minute hand is on 12.) *What time will it be 1 hour later?* (5 o'clock) *How many minutes are in 1 hour?* (60)
- *What can you do in 1 hour?* (sample answers: Watch 2 TV shows, play one of my video games; bake a cake; help wash a car.)
- ✎ **Problem Solving** *Our class spent 1 hour in the computer lab. At what time could we have started and at what time would we finish?* (Accept any reasonable times 1 hour apart.)

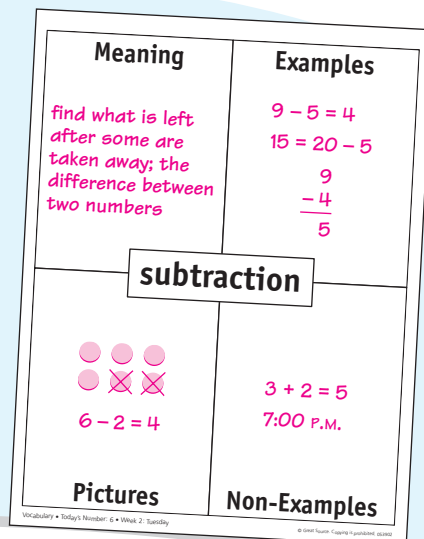
Math to Know pp. 338–339



VOCABULARY subtraction

- *What do you know about subtraction?* (Answers will vary.)
- *Which symbol shows subtraction?* (–) *What can we call the result of subtraction?* (the difference)
- *Is addition the same as subtraction?* (No.) *Why?* (sample answer: Addition is combining two or more groups.)

Math to Know p. 46



Summer Success[®] Math

Grade 4 Sample

Here are Number Names Activities you can use for students in Grade 4.

- Number Names activities reinforce concepts and help students identify patterns and connections.
- Whole-group instruction weaves together different math strands including basic number sense, basic operations, patterns and algebraic thinking, geometry, measurement, and vocabulary.

NUMBER NAMES Today's Number 5

WORDY Write and draw. **Problem Solving** Write a 100-page book. The publisher says you can get 100 pages for \$10. How much more money do you need to buy 100 pages for \$10? How much more money do you need to buy 100 pages for \$10? How much more money do you need to buy 100 pages for \$10?

ASSESSMENT Write and draw. **Problem Solving** Write a 100-page book. The publisher says you can get 100 pages for \$10. How much more money do you need to buy 100 pages for \$10? How much more money do you need to buy 100 pages for \$10? How much more money do you need to buy 100 pages for \$10?

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NUMBER NAMES Today's Number 10

WORDY Write and draw. **Problem Solving** Write a 100-page book. The publisher says you can get 100 pages for \$10. How much more money do you need to buy 100 pages for \$10? How much more money do you need to buy 100 pages for \$10? How much more money do you need to buy 100 pages for \$10?

ASSESSMENT Write and draw. **Problem Solving** Write a 100-page book. The publisher says you can get 100 pages for \$10. How much more money do you need to buy 100 pages for \$10? How much more money do you need to buy 100 pages for \$10? How much more money do you need to buy 100 pages for \$10?

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Number Names Instruction

Number Names provides daily instruction covering five different math strands plus **Vocabulary**. **Problem Solving** is integrated throughout. Today's Number, unique to each day, is the connecting thread that ties the discussion together. For example, if Today's Number is 3, students may look at the number in terms of:

Number: How do we write the number thirty-three thousand, fifteen?

Operations: What is $99 + 3$? $999 + 3$?

Patterns and Algebra: Which is easier to add, $103 + 7$ or $103 + 15$?

Geometry: How are the triangles alike? How are they different?

Measurement: If the concert starts at 4:00 and lasts 3 hours, what time will it end?

GET STARTED

- Choose a Number Names display area that allows students to sit as close as possible. Some teachers prefer to have the students sit on the floor or in chairs in front of the Number Names wall to focus their attention.
- Post the six Recording Pads and their labels, leaving a space for Today's Number.

DISCUSSION

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- Reaching All Learners hints can help struggling students, including English Language Learners, who may benefit from another approach. References to the Great Source Math Handbook, *Math to Know*, follow each discussion strand and provide a resource for re-teaching.

Number

453,905 3 thousand
 14,376 3 hundred
3,612,927 3 million

thirty-three thousand, fifteen

• 33,015
 • 30,000 + 3,000 + 10 + 5

33,600 | 33,200 | 33,400
 33,200 < 33,400 < 33,600

Operations


$9 + 3 = \underline{12}$
 $99 + 3 = \underline{102}$
 $999 + 3 = \underline{1,002}$
 $1,999 + 3 = \underline{2,002}$

$100 - 3 = \underline{97}$
 $200 - 3 = \underline{197}$
 $300 - 3 = \underline{297}$
 $900 - 3 = \underline{897}$
 $812 - 3 = \underline{809}$







Today's Number

3

Vocabulary

Meaning	Examples
an arrangement from least to greatest, or from greatest to least	5, 10, 15, 20, 25 ...
order	
	$80 - 34 = 46$
Pictures	Non-Examples

Measurement

 Start	 End
 Start	 End
 Start	 End



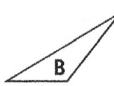

Times will vary.

Patterns and Algebra

$103 + 7 + 8 = \underline{118}$
 $(103 + 7) + 8$
 $110 + 8$

$103 + 7 + 8 = \underline{118}$
 $103 + (7 + 8)$
 $103 + 15$

Geometry

 A equilateral	 C isosceles
 B scalene	 D right

NUMBER NAMES TODAY'S NUMBER 4



Even Numbers:

12, 18, 20, 34, 56, ...

Odd Numbers:

1, 33, 45, 87, 99, ...

NUMBER Even and odd numbers

- How can we divide these 4 hearts equally into 2 groups? (loop 2 and 2) What do we call whole numbers that can be divided into 2 equal groups? (even numbers)
- What 1-digit numbers are even? (0, 2, 4, 6, 8) Others that are not 1-digit? (sample answers: 12, 18, 20, 34, 56) Tell how you know. (They all can be split in half or divided into 2 equal groups.)
- What do we call numbers that cannot be divided equally into 2 groups? (odd numbers) What are some odd numbers? (sample answers: 11, 33, 45, 87, 99) How do you know? (In groups of 2, there is always 1 left over.)

Math to Know p. 91

$$9 + 4 = \underline{\quad 13 \quad}$$

$$19 + 4 = \underline{\quad 23 \quad}$$

$$129 + 4 = \underline{\quad 133 \quad}$$

$$399 + 4 = \underline{\quad 403 \quad}$$

$$100 - 4 = \underline{\quad 96 \quad}$$

$$300 - 4 = \underline{\quad 296 \quad}$$

$$200 - 4 = \underline{\quad 196 \quad}$$

$$900 - 4 = \underline{\quad 896 \quad}$$

$$153 - 4 = \underline{\quad 149 \quad}$$

OPERATIONS Mental math

- What is $9 + 4$? (13) Tell how you got the answer using mental math. ($9 + 1$ makes 10, plus 3 makes 13) $19 + 4$? ($19 + 1$ makes 20, plus 3 makes 23) $129 + 4$? (133) $399 + 4$? (403)
- What do you notice when you add 4 to a number that ends in 9? (The answer will always be the next ten and 3 more.) In 99? (next hundred and 3 more)
- What fact can you use to help you subtract $153 - 4$? ($13 - 4 = 9$) What is $153 - 4$? (149)
- Tell how you can use mental math to subtract 4 from 400. (sample answer: I know 4 before 400 is 396.)

Math to Learn p. 102

2, 6, 10, 14, 18, 22,
26, 30

Change: increase by 4

Pattern: sample answer:
Add 4 to get the next number.

400, 404, 408, 412,
416, 420, 424

PATTERNS AND ALGEBRA Look for a pattern

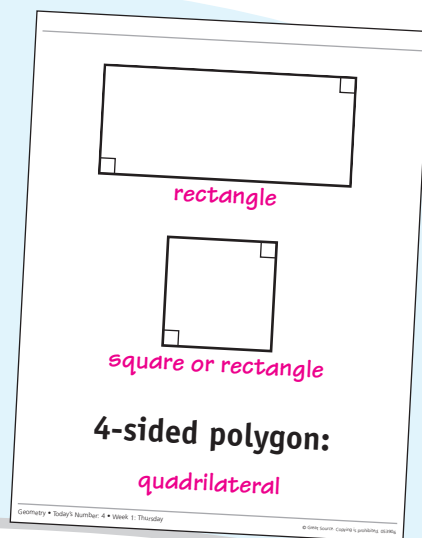
- Are the numbers increasing or decreasing? (increasing) How can you tell? (sample answers: It starts with 2 and ends with 18; it goes from a 1-digit number to a 2-digit number.) What is the change? (increase by 4)
- How would you describe the pattern? (sample answer: Add 4 to get the next number.) Following the pattern, what are the next 3 numbers? (22, 26, 30)
- Invite a volunteer to continue the second pattern on the recording pad.

Math to Know p. 374

GEOMETRY Squares and rectangles

- ✎ *What do we call all 4-sided polygons? (quadrilaterals) Name the quadrilaterals you see. (rectangle, square)*
- ✎ *Right angles create square corners. Show the square corners on the recording pad. Which geometric figures do you know have only right angles? (rectangle and square)*
- *What is special about a square? (It has 4 sides the same length.) Are squares also rectangles? (Yes.) Are rectangles also squares? (No.) Tell why. (On a rectangle, opposite sides have the same lengths, but all 4 sides don't have to be the same.)*

Math to Know pp. 312–313

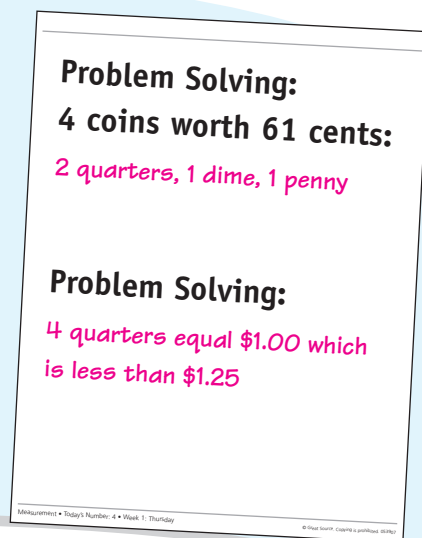


MEASUREMENT Coin combinations

- ✎ **Problem Solving** *I have four coins in my pocket with a total value of 61 cents. What coins might I have? (2 quarters, 1 dime, 1 penny) How do you know? (25 + 25 is 50; 50 + 10 is 60; 60 + 1 is 61.) How did you figure it out? (Accept all logical reasoning.)*
- ✎ **Problem Solving** *Asim has 4 quarters. Tanya has \$1.25. Who has more money? (Tanya) How do you know? (4 quarters equal \$1.00, which is less than \$1.25.)*

REACHING ALL LEARNERS Use play coins and bills to count and compare amounts.

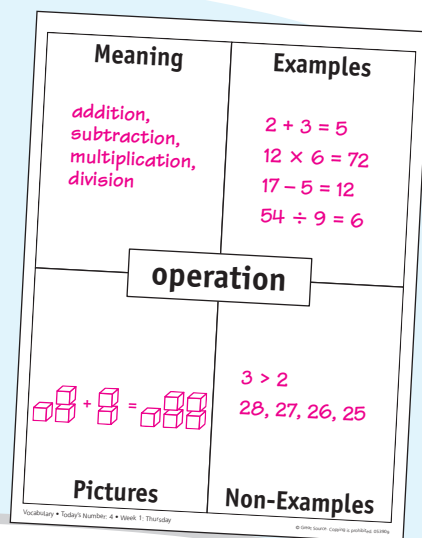
Math to Know pp. 17–19



VOCABULARY operation

- *Can you name the four operations? (addition, subtraction, multiplication, division)*
- *What are the symbols? (+, −, ×, ÷ or $\overline{}$)*
- *Is measurement an operation? (No.) Tell why. (sample answer: It is a record of a dimension.)*

Math to Know p. 458



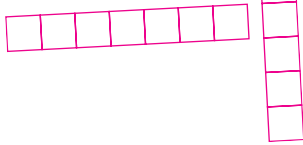
NUMBER NAMES TODAY'S NUMBER 7

7, 14, 21, 28, 35, 42, 49, 56,
63, 70

First 3 multiples of 7:

7, 14, 21

Array for 7:



Number • Today's Number: 7 • Week 2: Wednesday

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NUMBER Multiples and prime numbers

- Let's skip-count aloud by 7s. (see recording pad) When you skip-count, you say multiples of a number. A multiple is the product of that number and any whole number. What are the first 3 multiples of 7? (7, 14, 21)
- What arrays can you make for 7? (7×1 and 1×7) A number that has exactly 2 factors, one and itself, is a prime number.
- What are some other prime numbers? (2, 3, 5)

REACHING ALL LEARNERS Remind students that 1 is *not* a prime number.

Math to Know pp. 90, 92

\times	7	$7 \times 8 = 56$
1	7	
2	14	$56 \div 7 = \underline{8}$
3	21	
4	28	Fact family for
5	35	$7 \times 9 = 63$
6	42	$9 \times 7 = 63$
7	49	$63 \div 7 = 9$
8	56	$63 \div 9 = 7$
9	63	
10	70	

Operations • Today's Number: 7 • Week 2: Wednesday

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OPERATIONS Fact families

- Let's complete the multiplication facts for 7. (see recording pad)
- How can you help someone remember $6 \times 7 = 42$? (sample answers: If you know $6 \times 6 = 36$, then 6 more is 42; if you know $3 \times 7 = 21$, then 6×7 is double that.)
- Let's write the fact family for $7 \times 9 = 63$. ($9 \times 7 = 63$, $63 \div 7 = 9$, $63 \div 9 = 7$)

Math to Know pp. 72, 82

10, 17, 24, 31, 38,
45, 52, 59

Another set of + 7 numbers:

sample answer:
5, 12, 19, 26, 33

Patterns and Algebra • Today's Number: 7 • Week 2: Wednesday

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PATTERNS AND ALGEBRA Number patterns

- Are the numbers increasing or decreasing? (increasing) What is happening in this pattern? (add 7 to find the next number)
- What are the missing numbers? (31, 52, 59)
- Write another set of numbers that fits this rule. (see recording pad)

REACHING ALL LEARNERS Remind students they can start with any number, as long as the pattern remains the same.

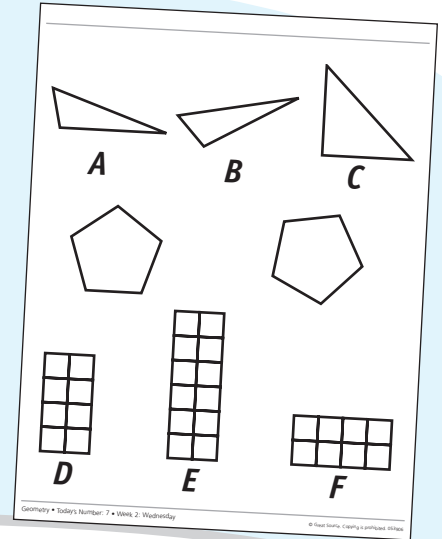
Math to Know pp. 250, 374

GEOMETRY Congruence

- Shapes that have the same size and same shape are congruent. Find 2 triangles that look congruent. (A, B) Which triangle is not congruent to A and B? (C) Why? (It has 2 sides that look the same, but triangles A and B have 3 sides with different lengths.)
- Do these 2 pentagons look congruent? (Yes.) How can you tell? (They have the same size and shape.)
- Look at the next group of shapes. Which ones are congruent? (D, F) Why? (same size, same shape)

REACHING ALL LEARNERS Use cutouts to confirm congruence.

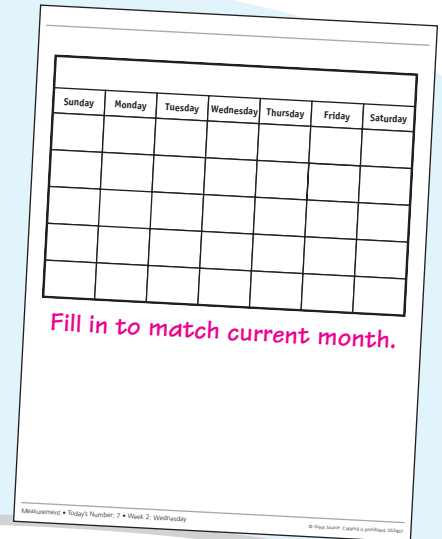
Math to Know p. 317



MEASUREMENT Calendar

- ✎ Fill in the calendar for this month.
- Today is Wednesday. What day will it be one week from today? (Wednesday) Two weeks from today? (Wednesday)
- ✎ What is today's date? What will it be one week from today? Two weeks from today? (Answers will vary.)

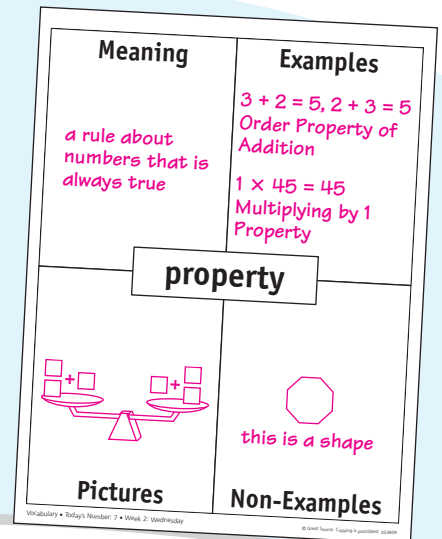
Math to Know p. 341



VOCABULARY property

- The more you compute, the more you find that some things are always true. These truths are called properties.
- Can you give an example of a property of addition? (sample answer: $3 + 2 = 5$ is the same as $2 + 3 = 5$, Order or Commutative Property.) Property of multiplication? (sample answer: $1 \times 3 = 3$, $1 \times 45 = 45$, Multiplying by 1 Property.)

Math to Know p. 240

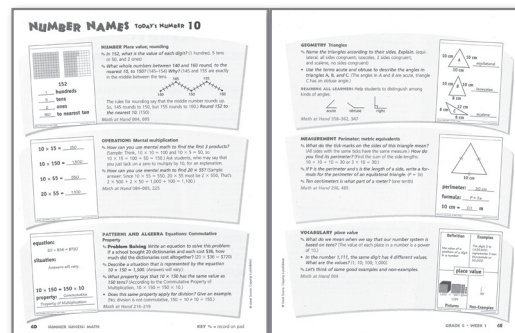


Summer Success[®] Math

Grade 6 Sample

Here are Number Names Activities you can use for students in Grade 6.

- Number Names activities reinforce concepts and help students identify patterns and connections.
- Whole-group instruction weaves together different math strands including basic number sense, basic operations, patterns and algebraic thinking, geometry, measurement, and vocabulary.



To see a full sample of *Summer Success: Math*, visit: hnhco.com/summersuccessmath

Number Names Instruction

Number Names provides daily instruction covering five different math strands plus **Vocabulary. Problem Solving** is integrated throughout. Today's Number, unique to each day, is the connecting thread that ties the discussion together. For example, if Today's Number is 10, students may look at the number in terms of:

Number: How do you round 152 to the nearest 10?

Operations: How can you use mental math to find 20×55 ?

Patterns and Algebra: Describe a situation that can be represented by the equation $10 \times 150 = 1,500$.

Measurement: Ten centimeters is what part of a meter?

GET STARTED

- Choose a Number Names display area that allows students to sit as close as possible.
- Post the six Recording Pads and their labels, leaving a space for Today's Number.

DISCUSSION

- During each day's discussion, detailed in the Teacher's Edition, students consider questions displayed on the day's Recording Pads. Answers are collectively agreed upon and then written on the pads, providing a lasting representation of the concepts covered.
- Encourage students to interact with each other by listening to one another, sharing their reasoning, and respectfully questioning each other. To raise their level of thinking, follow up student responses with questions such as: *How do you know? How can we figure out if you're right? Does anyone else have another answer?*
- Reaching All Learners hints can help struggling students, including English Language Learners, who may benefit from another approach. References to the Great Source Math Handbook, *Math at Hand*, follow each discussion strand and provide a resource for re-teaching.

Number

152

1	hundreds
5	tens
2	ones

150 to nearest ten

Vocabulary

Definition	Examples
the value of a position of a digit in a number	The digit 3 in 1,435,600 represents 3 ten thousands or 30,000
place value	
1,000 + 100 + 20 + 4 = 1,124	XIV
Pictures	Non-Examples

Operations

$10 \times 15 = \underline{\quad 150 \quad}$

$10 \times 150 = \underline{\quad 1,500 \quad}$

$10 \times 55 = \underline{\quad 550 \quad}$

$20 \times 55 = \underline{\quad 1,100 \quad}$

Today's Number

10

Measurement

10 cm

perimeter: $\underline{\quad 30 \text{ cm} \quad}$

formula: $\underline{\quad P = 3s \quad}$

10 cm = $\underline{\quad 0.1 \quad}$ m

Patterns and Algebra

equation:
 $20 \times \$36 = \720

situation:
Answers will vary.

$10 \times 150 = 150 \times 10$

property: Commutative
Property of Multiplication

Geometry

10 cm 10 cm 10 cm equilateral

10 cm 10 cm 8 cm isosceles

6 cm 12 cm 8 cm scalene

NUMBER NAMES TODAY'S NUMBER 100

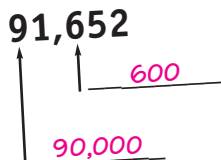
hundreds in:

$$1,000 \quad \underline{10}$$

$$10,000 \quad \underline{100}$$

$$100,000 \quad \underline{1,000}$$

$$1,000,000 \quad \underline{10,000}$$



Number • Today's Number: 100 • Week 1: Tuesday

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NUMBER Place value

- How many hundreds are in 1,000? (10) In 10,000? (100) In 100,000? (1,000) In 1,000,000? (10,000)
- In the number 91,652, what is the value of the 6? (600) Of the 9? (90,000)
- How many twenty-fives are in 100? (4) How can you use that to find the number of twenty-fives in 1,000? (There are 10 times as many twenty-fives in 1,000 as in 100, so 40.)

REACHING ALL LEARNERS For some students, you may wish to introduce the twenty-fives problem with an easier one: *How many fives are in 100?* (twice as many fives as tens, so 20)

Math at Hand 004

$$100 \times 15 = \underline{1,500}$$

$$200 \times 15 = \underline{3,000}$$

25 × 110:

$$= 25 \times (100 + 10)$$

$$= (25 \times 100) + (25 \times 10)$$

$$= 2,500 + 250$$

$$= 2,750$$

Operations • Today's Number: 100 • Week 1: Tuesday

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OPERATIONS Mental multiplication

- How can you use the first problem to solve the second? (Multiply the product of 100×15 by 2.)
- Explain how to use mental math to solve 25×110 . (One way: Use the Distributive Property to break apart 110: $(25 \times 100) + (25 \times 10) = 2,500 + 250 = 2,750$.)
- **Problem Solving** Use what you know about hundreds. Every class has 25 students; there are 12 classes. How many students? (Since $4 \times 25 = 100$, every 4 classes has 100 students. Since $3 \times 4 = 12$ and $3 \times 100 = 300$, then there are 300 students.) What equation represents this calculation? ($25 \times 12 = (25 \times 4) \times 3$)

Math at Hand 088

1; 10; 100; 1,000;
 $\underline{10,000}$; $\underline{100,000}$;
 $\underline{1,000,000}$

100 × 150

$$= 100 \times (100 + 50)$$

$$= (100 \times 100) + (100 \times 50)$$

property:

Distributive Property

12 × 13

$$= (\underline{10} \times 13) + (2 \times 13)$$

Patterns and Algebra • Today's Number: 100 • Week 1: Tuesday

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PATTERNS AND ALGEBRA Analyze a pattern; Distributive Property

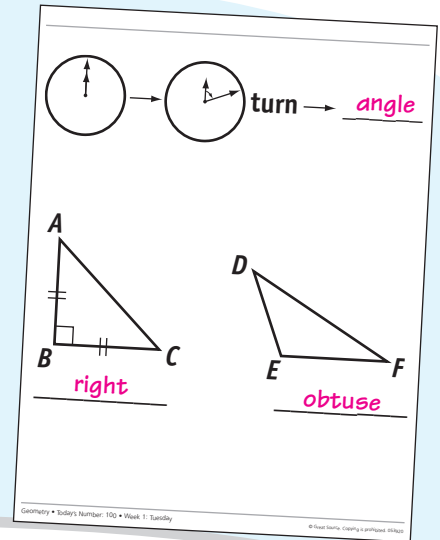
- Extend the pattern and explain your answer. (Each term is 10 times the one before: 10,000; 100,000; 1,000,000.)
- What property says that 100×150 has the same value as $(100 \times 100) + (100 \times 50)$? (Distributive Property)
- Use the Distributive Property to fill in the blank. What is 12×13 ? (156)

Math at Hand 225

GEOMETRY Angles

- Angles measure how far you turn. If you turn completely around in a circle, you turn 360° . A right angle is a turn of $\frac{1}{4}$ of a circle. How many degrees is that? (90°)
- Tell whether each angle in these triangles is greater than, equal to, or less than a right angle. ($m\angle A < 90^\circ$, $m\angle B = 90^\circ$, $m\angle C < 90^\circ$, $m\angle D < 90^\circ$, $m\angle E > 90^\circ$, $m\angle F < 90^\circ$)
- Name these triangles by their angles. (right triangle, obtuse triangle.)

Math at Hand 346–347, 361

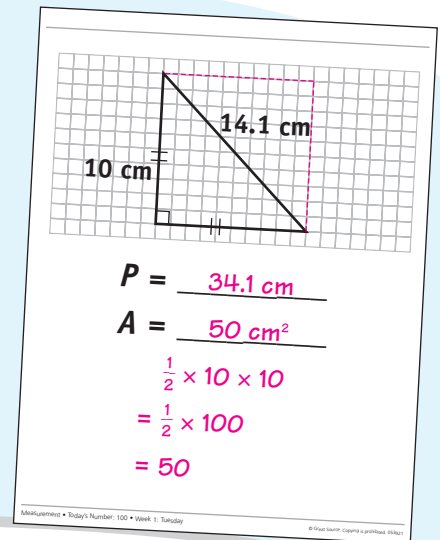


MEASUREMENT Perimeter; area

- This is an isosceles triangle. What does that mean? (2 sides are the same length) What is the perimeter of the triangle? (34.1 cm)
- Flip the triangle across the long side. What quadrilateral do you have? (a square)
- How can you use this to calculate the area of the triangle? (It is half the area of the square, or 50 cm^2 .)

REACHING ALL LEARNERS If students cannot visualize flipping the triangle, have them carefully trace and cut it out. Then, tape the tracing in place.

Math at Hand 296, 301



VOCABULARY Distributive Property

- What property says that $4 \times 7 = (4 \times 3) + (4 \times 4)$? (Distributive Property)
- What are we distributing with the Distributive Property? (We distribute one factor between addends of the other factor, multiplying the addends separately.)
- Let's demonstrate 3×4 for our pictures.
- Who can think of some good examples and non-examples?

Math at Hand 225

Definition	Examples
If one factor is written as a sum, multiplying each addend before adding does not change the product.	$4 \times 7 =$ $(4 \times 3) + (4 \times 4)$ $90 \times 11 =$ $(90 \times 10) + (90 \times 1)$
Distributive Property	
4 groups of 3 ○○○ ○○○ ○○○ $3 \times 4 = 12$	$100 \times 5 = 5 \times 100$ $100 \times 25 =$ $10 \times 10 \times 25$
4 groups of (2 + 1) ○○ ○○ ○○ ○○ 8 ○ ○ ○ ○ +4 12	Non-Examples
Pictures	

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Math and Reading Summer School
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“*Summer Success: Math* is so easy to use. I loved my kit! It was so neatly organized and well put together. I especially liked the ‘Number Names’ warm up. My students would get excited every morning when it was time to begin.”

Manda Edwards, Teacher
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“*Summer Success: Math* is an excellent program. It covers all the math strands with plenty of opportunities for student interaction and practice. The students loved the games.”

LeAnna Graham, Teacher
Hutsell Elementary Summer School
Katy, TX

“The constant review of concepts during the ‘Number Names’ was extremely beneficial for retention of knowledge. The children enjoyed the games and ‘Make and Take’ activities.”

Angie Meredith
EYP Summer School at Fayetteville Elementary School
Fayetteville, GA

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Wanda Smith, Teacher
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“I felt the way the *Summer Success: Math* program connects the key math concepts with the different math strands was so vital to students academic success.”

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