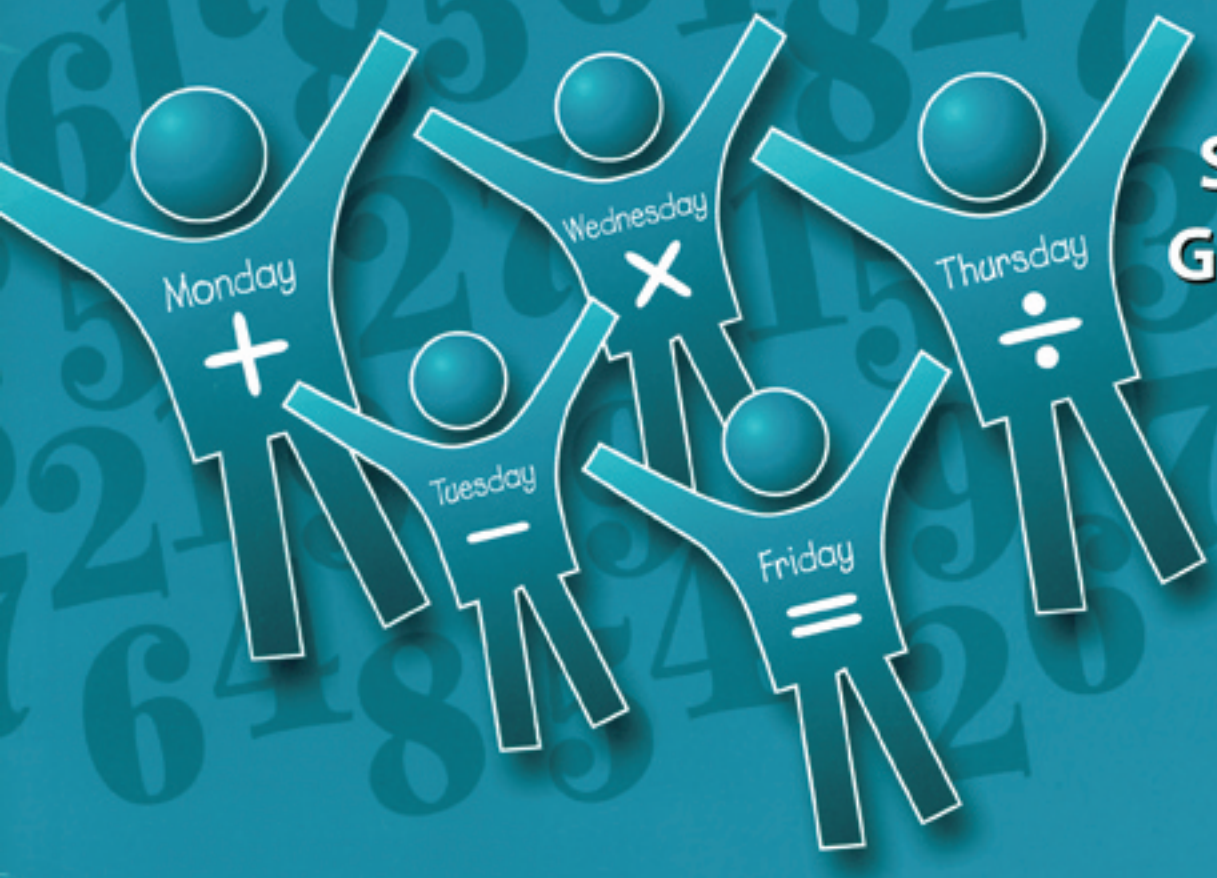
Weekday Workouts™ for Math



SAMPLER
Grades 1-6

Daily problem solving and critical thinking activities to build math success!

Weekday Workouts™ for Math

Available in 2 formats!

1 Teacher's Guide *with Blackline Masters*

The complete resource (shown on pages 2 and 3) includes:

- 180 daily problems on blackline masters
- 36 Weekly Challenges on blackline masters
- Helpful teaching tips and suggestions
- Correlations to the *NCTM Principles and Standards*

2 Student Booklets *Also Available*

These pocket-sized booklets contain all 180 daily problems in a convenient consumable format.

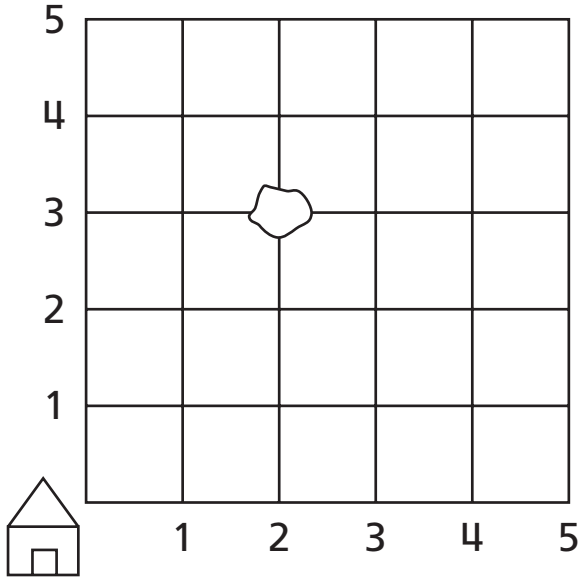
- No photocopying needed; fast and easy to use
- One problem per page gives students room to work
- This collection of student work can show growth over the year

DAY FOUR

Tani walks from  to  .

How does he get there?

right _____, up _____



Grade 1

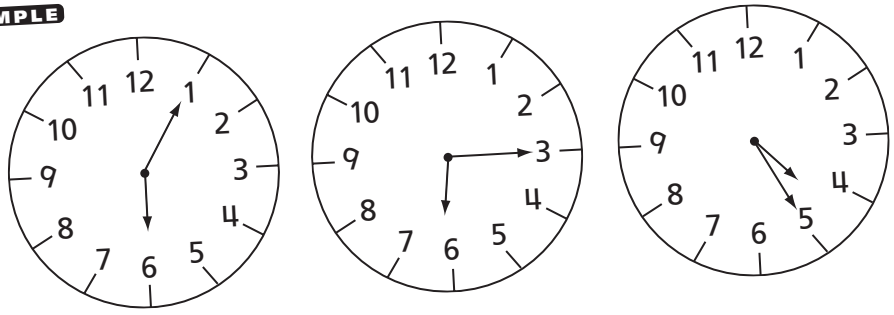
Actual size of Student Booklet page shown

Weekday Workouts™ for Math

…offer a flexible way to motivate students and support teachers while reinforcing problem-solving and critical-thinking skills and strategies.

- Get students ready for math lessons with *Daily Problems*.
- Reinforce math concepts from the week with *Weekly Challenges.*
- Motivate all students in math with these time-saving activities.
- Introduce students to a variety of interesting problems.
- Reinforce the *NCTM Principles and Standards* in your classroom.

Grade 2 SAMPLE



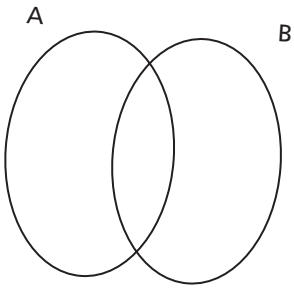
1. Draw the clocks in order from earliest time to latest time.
2. Write the time below each clock.

Grade 6 SAMPLE

Set A is the multiples of 3, and Set B is the prime numbers.

Place the following numbers in the Venn diagram.

2, 3, 9, 11, 51, 53



Try these!

Teacher's Guide

Each convenient two-page layout contains one complete

WEEKDAY WORKOUTS

DAY ONE

The distance from the Earth to the moon is about 240 thousand miles. The distance from the Earth to the sun is about 93 million miles. Write these distances using only numerals.

DAY TWO

Estimate each distance in miles.

1. once around a high school track
2. from your school to your home
3. from your town to New York City

DAY THREE

Find the next number in the pattern. Explain the pattern.

100, 96, 92, 88, ...

WEEK 15 GRADE 4

DAY ONE ANSWERS

240,000 miles; 93,000,000 miles

You can show that the sun is about 400 times farther away from the Earth than the moon is by multiplying 240,000 by 400.

NCTM Standards
Connections; Number and Operations; Representation

DAY TWO ANSWERS

1. About $\frac{1}{4}$ mi (for a typical track)

2. Answers will vary.

3. Answers will vary.

NCTM Standards
Measurement; Connections

DAY THREE ANSWERS

A 84; Starting with 100, each number is 4 less than the previous number.

B Ask students to name the tenth number in the pattern. (64)

Challenge WEEKLY Weekly Challenge 15, page 86, offers an extension of this activity.

C **NCTM Standards**
Algebra; Communication; Number and Operations; Connections

Blackline Masters

Student pages are formatted for easy photocopying. A full week of daily activities appears on each 2-page layout!

Teacher Support

Support for every problem

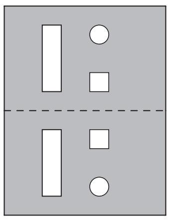
- A Answers
- B Teaching Tips
- C *NCTM Principles and Standards*

week of problems *plus* teacher support.

Grade 4, Week 15

WEEK 15 GRADE 4

DAY FOUR ANSWERS



Explain that one side of the unfolded piece of paper is the reflection of the other side. The fold line is a line of symmetry.

NCTM Standards
Geometry

DAY FIVE ANSWERS

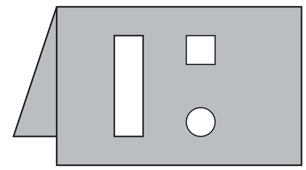
An even number. There are 5 even numbers and 3 odd numbers. The probability that the spinner will land on an even number is $\frac{5}{8}$, the probability that the spinner will land on an odd number is $\frac{3}{8}$.

NCTM Standards
Data Analysis and Probability; Communication

WEEKDAY WORKOUTS

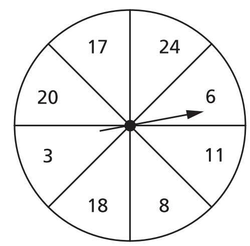
DAY FOUR

A sheet of paper is folded in half as shown. Three figures are cut out through both halves of the sheet. What will the piece of paper look like when it is unfolded? Draw it.



DAY FIVE

Is the spinner more likely to land on an odd number or an even number? Explain. (Each wedge is exactly the same size.)



WEEK 15 GRADE 4

ANSWERS

1. Descriptions will vary. The sixteenth number in the pattern is 136.
2. ⌶, I, ¬, ꓘ, Γ, M, Ƶ, O, ᑫ, Q, ᗡ, S, ⊣, U, >, M, ×, Y, ᴺ

If students are having trouble with problem 1, give this hint to those who need help on an individual basis. [Hint: Look at the **difference** between numbers in the pattern: 3 – 1, 6 – 3, 10 – 6, etc.]

Weekly Challenges

The Teacher's Guide also contains 36 Weekly Challenges—one for each week of the school year! Weekly Challenges provide optional enrichment activities that build on one of the daily problems introduced during the week.

WEEKLY Challenge

Name ______________ Date ______________

WEEK FIFTEEN

1. Describe the pattern. Then give the 16th number in the pattern.

   1, 3, 6, 10, 15, 21, ...

2. Follow the pattern. Complete the alphabet.

   A, ꓭ, Ɔ, ᗜ, E, ᒣ, ᘓ, . . .

Try the sample problems on pages 4–17 with your students!

GRADE **1** WEEK 18

DAY ONE

Write as many addition and subtraction sentences as you can with the numbers 9, 16, and 7.

DAY TWO

1. What number comes just **before** 40?
2. What number comes **between** 26 and 28?
3. What number comes just **after** 55?

DAY THREE

Write the missing numbers in the pattern.

5, _____, 15, _____, _____, 30, _____, _____

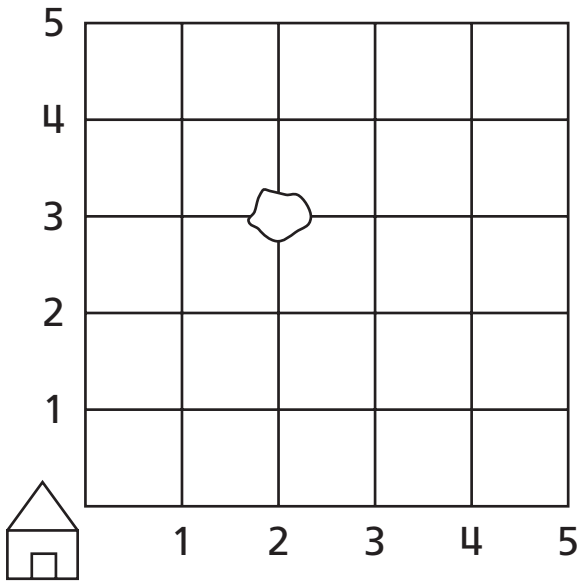
What is the rule?

DAY FOUR

Tani walks from  to  .

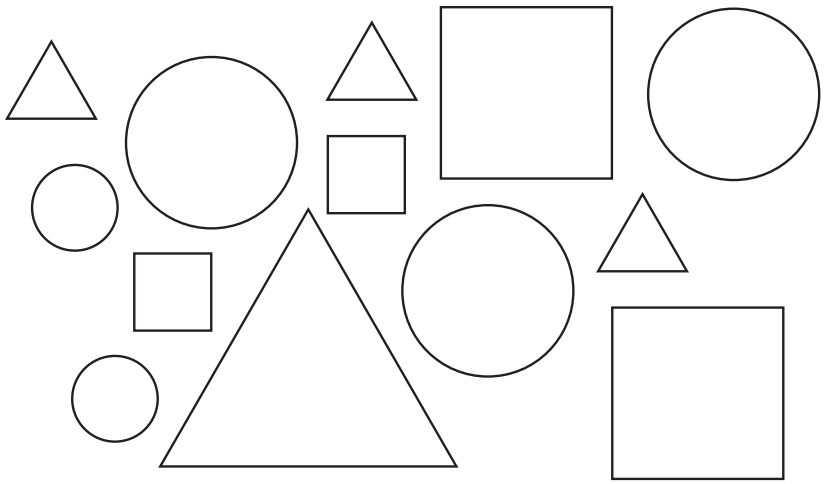
How does he get there?

right _____, up _____



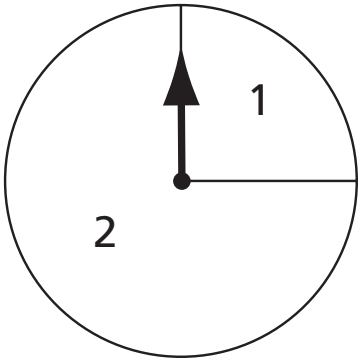
DAY FIVE

Sort the shapes in two different ways.
Draw pictures to show how you sort them.



DAY ONE

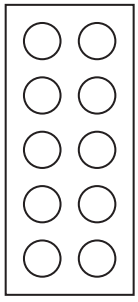
1. Which number is the spinner more likely to land on?
2. Which number is the spinner less likely to land on?
3. Is it certain or impossible that you will spin a 3?



DAY TWO

1. Write the year you were born.
2. Draw a box around the last two digits of the year you were born.
3. Subtract 39 from that number. What is the difference?

DAY THREE

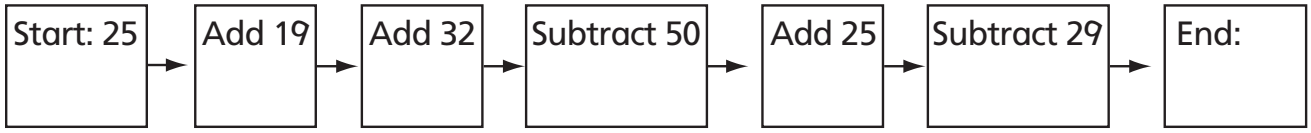


= 10 ○ = 1

Draw a picture that shows 38.

DAY FOUR

Follow the directions. Where do you end?

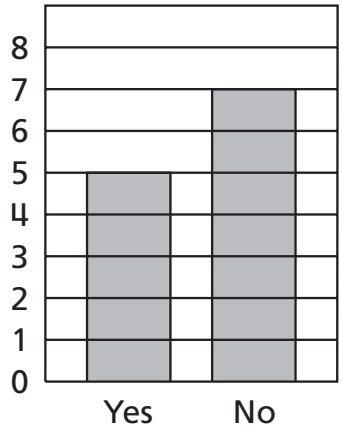


DAY FIVE

Daniel used the tally table to make a bar graph.

Do you have a brother?	
Yes	𝍸 ||
No	𝍸

Do you have a brother?



1. What did he do wrong?
2. How could he fix it?

GRADE 3 WEEK 18

DAY ONE

Gaston buys a shirt for $9.39. He pays with the fewest number of coins and bills possible. What coins and bills does Gaston use?

DAY TWO

Amelia bought 12 apples at the store. $\frac{2}{3}$ of the apples were red and $\frac{1}{3}$ of the apples were green.

1. Draw a picture of the apples Amelia bought.

2. How many red and green apples did she buy?

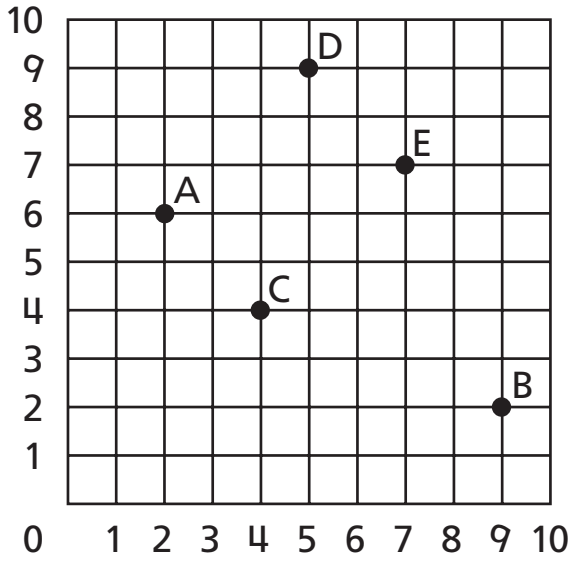
DAY THREE

What numbers come next in the pattern? Why do you think they come next?

100, 211, 322, 433, _____, _____

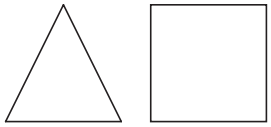
DAY FOUR

Give the ordered pair for each point on the grid.

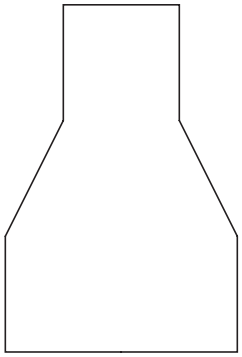


DAY FIVE

Use these shapes



to make this shape.



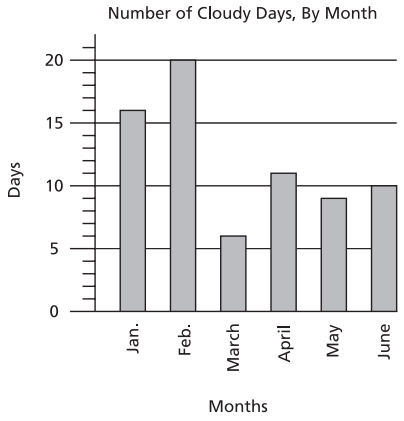
Use a total of 6 smaller shapes to make the larger shape. You may use each shape more than once. Tell how many of each shape you used. Draw a picture of your work.

DAY ONE

Suke is 3 years older than Lauren. Is the sum of their ages an odd number or an even number? Explain.

DAY TWO

For science class, Edna kept track of the number of cloudy days during the last six months. Here is a graph of her data.



What was the average number of cloudy days per month from January to June?

DAY THREE

Separate the following fractions into two groups. Which are greater than $\frac{1}{2}$? less than $\frac{1}{2}$?

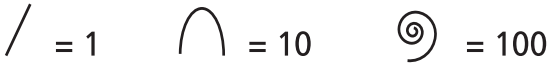
$\frac{5}{8}$ $\frac{2}{3}$ $\frac{1}{4}$ $\frac{3}{8}$ $\frac{2}{5}$ $\frac{3}{4}$ $\frac{1}{3}$ $\frac{3}{5}$ $\frac{4}{7}$ $\frac{3}{7}$

DAY FOUR

A movie costs $5 for adults and $3 for children. Mr. and Mrs. Kuan and their four children go to the movies. How much does it cost?

DAY FIVE

In ancient Egypt, they used a different number system:



For example, 235 was written 

Use this system to write 132 and 314.

GRADE 5 WEEK 14

DAY ONE

1. Name all the factors of 12.
2. Name three multiples of 12.
3. Find a number which is both a factor of 12 and a multiple of 12.

DAY TWO

A car traveled 230 miles on 9 gallons of gas.
How many miles per gallon did the car get on that trip?

DAY THREE

An 8-in. snowfall is equivalent to about an inch of rain.

1. About how much rain would a 20-in. snowfall equal? a 10-in. snowfall?
2. If a $\frac{3}{4}$-in. rainfall were all snow, about how much snow would that be?

DAY FOUR

Lisa has been saving her baby-sitting money. "I have about $600 in the bank now," she said. Suppose Lisa had rounded the amount to the nearest hundred. What might her actual bank balance be? How high might it be? How low? Explain.

DAY FIVE

Arrange these figures in order by their area, from smallest to largest.

Fig. A

Fig. B

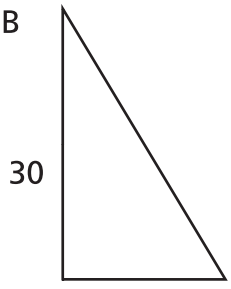
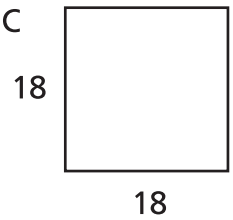


Fig. C



DAY ONE

There are 12 blue socks and 6 black socks in a drawer. You are dressing in the dark, and you take socks out of the drawer at random, one at a time. How many socks must you remove to be certain that you have a matching pair?

DAY TWO

Find the mean, the median, and the mode for this set of numbers.

3, 4, 6, 7, 7, 8, 9, 11, 15, 16, 19, 19, 19

DAY THREE

Hiroshi walked to the park, while his sister, Anzu, rode her bike. It took Hiroshi 36 minutes, but Anzu made it in 18 minutes. Hiroshi walked at about 4 mph. How fast did Anzu ride?

DAY FOUR

Figure *MNOP* is a parallelogram, with $M = (2,1)$, $N = (5,4)$, and $O = (9,4)$. What are the coordinates of Point *P*? Sketch *MNOP*. What is the area of *MNOP*?

DAY FIVE

Twelve quantities are listed. Which are equal?

40%	$\frac{1}{3}$	$\frac{24}{60}$	$\frac{2}{5}$
$\frac{1}{4}$	25%	0.4	$\frac{15}{45}$
0.40	0.25	$\frac{9}{36}$	0.250

GRADE **1** WEEK 18

Day one answers

9 + 7 = 16; 7 + 9 = 16; 16 - 7 = 9; 16 - 9 = 7

Make sure that children use all three numbers in each addition and subtraction sentence. Tell children that the four number sentences that they wrote are the *fact family* for 9, 16, and 7.

NCTM Standards Number and Operations; Algebra; Connections

Day two answers

1. 39 **2.** 27 **3.** 56

Some children may need to look at a hundred chart to answer the questions. Others will be able to answer the questions using mental math.

NCTM Standards Number and Operations; Algebra

Day three answers

10; 20; 25; 35; 40

Rule: Count by fives.

If this is too easy for some children, have them extend the pattern all the way to 100.

NCTM Standards Number and Operations; Algebra; Problem Solving

Day four answers

right 2, up 3

Using the directions *right* and *up* to move on a grid prepares children for learning about ordered pairs and coordinate graphing in later grades.

NCTM Standards Algebra; Geometry; Data Analysis and Probability

Day five answers

Answers will vary.

Some possible ways to sort the shapes are: small/large; triangles/circles/squares; shapes with 0 corners/shapes with 3 or more corners. Accept other reasonable answers as you check children's drawings.

NCTM Standards Geometry; Data Analysis and Probability; Reasoning and Proof

GRADE **2** WEEK 18

Day one answers

1. 2 **2.** 1 **3.** Impossible

As an extension, give children spinners divided and labeled like this one. Have them spin the spinner 10 times and record their results in a tally table.

NCTM Standards Data Analysis and Probability

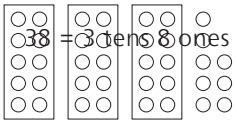
Day two answers

Answers will vary.

Check children's answers. Children may not be familiar with the term *digits*. Show them an example of how to solve the problem using some other year, for example 1976. Draw a box around 76. Subtract 39. The difference is 37. If children don't know what year they were born, then give them an approximate year to use.

NCTM Standards Number and Operations; Measurement; Connections

Day three answers



NCTM Standards Number and Operations; Reasoning and Proof; Representation

Day four answers

22

25′′′+′′′19′′′=′′′44; 44′′′+′′′32′′′=′′′76; 76′′′−′′′50′′′=′′′26; 26′′′+′′′25′′′=′′′51; 51′′′−′′′29′′′=′′′22

NCTM Standards Number and Operations; Problem Solving

Day five answers

1. He made the bars the wrong heights.
2. The bar for *yes* should go up to 7 and the bar for *no* should go up to 5.

NCTM Standards Data Analysis and Probability; Problem Solving; Communication

GRADE **3** WEEK 18

Day one answers

one $5 bill, four $1 bills, one quarter, one dime, four pennies

Students may need to use play money or draw a picture of the transaction to solve.

NCTM Standards Number and Operations; Problem Solving; Connections

Day two answers

1. Check students' drawings. **2.** 8 red, 4 green

Finding a fraction of a group can be more challenging than finding a fraction of a whole. Some students may need to use connecting cubes before drawing a picture.

NCTM Standards Number and Operations; Problem Solving; Representation

Day three answers

544, 655

Explanations will vary.

Possible explanations: Each digit increases by 1 each time; the pattern is to keep adding 111. Accept other answers and explanations that students can justify.

NCTM Standards Algebra; Problem Solving; Communication

Day four answers

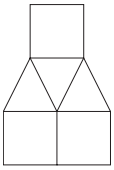
A (2, 6) **B** (9, 2) **C** (4, 4) **D** (5, 9) **E** (7, 7)

Remind students that the first number in an ordered pair tells how many units to move horizontally and the second number tells how many units to move vertically.

NCTM Standards Algebra; Data Analysis and Probability; Representation

Day five answers

3 triangles and 3 squares;



Encourage students to try to figure out the answer by drawing a picture. If they are struggling, allow them to use pattern blocks.

NCTM Standards Geometry; Connections; Representation

GRADE **4** WEEK 14

Day one answers

An odd number; Whatever their ages, one is odd, the other even, so the sum is odd.
Discuss several examples of Suke's and Lauren's possible ages, such as 9 and 6, or 10 and 7, or 16 and 13 to show that the sum is always odd.
NCTM Standards Number and Operations; Reasoning and Proof

Day two answers

12 days
$\frac{(16 + 20 + 6 + 11 + 9 + 10)}{6} = \frac{72}{6} = 12$
Consider having students make a line graph of the data.
NCTM Standards Data Analysis and Probability; Connections

Day three answers

Greater than $\frac{1}{2}$: $\frac{5}{8}, \frac{2}{3}, \frac{3}{4}, \frac{3}{5}, \frac{4}{7}$

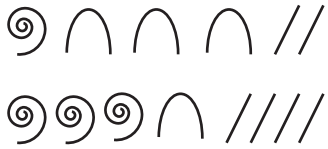
Less than $\frac{1}{2}$: $\frac{1}{4}, \frac{3}{8}, \frac{2}{5}, \frac{1}{3}, \frac{3}{7}$

You may wish to position the fractions on a number line to show on which side of $\frac{1}{2}$ the fractions appear.
NCTM Standards Number and Operations

Day four answers

$22
There are two adults (2″×″$5″=″$10) and four children (4″×″$3″=″$12), so it costs $10 + $12 = $22.
NCTM Standards Problem Solving

Day five answers



NCTM Standards Connections; Representation

GRADE **5** WEEK 14

Day one answers

1. 1, 2, 3, 4, 6, 12
2. Any three of the following: 12, 24, 36, 48, 60, . . .
3. 12
Students often confuse factor and multiple. Remind them to think "multiply" when finding a multiple.
NCTM Standards Number and Operations; Algebra

Day two answers

About 26 miles per gallon
230 ÷ 9″=″25.555
NCTM Standards Connections; Problem Solving

Day three answers

1. $2\frac{1}{2}$ in.; $1\frac{1}{4}$ in. **2.** 6 in.
Actually, the ratio of 8 in. of snow to 1 in. of rain is not exact. It depends on how dry and powdery the snow is. One inch of rain may be equivalent to just 3 or 4 in. of slushy wet snow, or up to 16 in. or so of very powdery snow.
NCTM Standards Problem Solving; Number and Operations; Connections

Day four answers

Her balance is at least $550, but less than $650.
550 is the smallest number which rounds up to 600. Since 650 or higher would round to 700, the balance must be less than 650.
NCTM Standards Representation; Connections; Communication

Day five answers

B, A, C
Fig. A Area =″15″×″20″=″300
Fig. B Area =″$\frac{1}{2}$″×″18″×″30″=″9″×″30″=″270
Fig. C Area =″18″×″18″=″324
NCTM Standards Geometry; Number and Operations

GRADE **6** WEEK 29

Day one answers

3
Explain that, after you remove 3 socks, the only possibilities are: 3 black; 2 black, 1 blue; 1 black, 2 blue; and 3 blue. There is always a matched pair with 3 socks.
NCTM Standards Data Analysis and Probability; Reasoning and Proof

Day two answers

Mean: 11; Median: 9; Mode: 19
Remind students to find the mean by adding the numbers and dividing by the number of items: 143 ÷ 13″=″11. The median is the middle number when there are an odd number of items and numbers are listed in order. The mode is the most frequent number.
NCTM Standards Number and Operations; Data Analysis and Probability

Day three answers

8 mph
Explain that Anzu made it in half the time. Therefore, she must have gone twice as fast.
NCTM Standards Problem Solving

Day four answers

P = (6,1); Area = 12 square units
Check students' graphs. Explain that, using *P* = (6,1), the base of the parallelogram is 4 and the height is 3.
Point out that *P* could also be (12,7) or (-2,1), but (6,1) is the most obvious answer.
NCTM Standards Measurement; Geometry

Day five answers

$\frac{1}{3}″=″\frac{15}{45}$

40%″=″$\frac{2}{5}$″=″$\frac{24}{60}$″=″0.4″=″0.40

$\frac{1}{4}″=″\frac{9}{36}″=″0.25″=″0.250″=″25\%$

NCTM Standards Number and Operations; Representation