Work Place 1A Instructions

WORK PLACES

Arrays to 100

Each pair of students will need

★ Work Place 1A Instructions (Work Place Student Book, pages 3 and 4)

★ 1A Number Charts (Work Place Student Book, page 5, optional)

★ 1A Arrays to 100 Record Sheet (Work Place Student Book, pages 6 and 7)

★ 1A Arrays to 100 Challenge (Work Place Student Book, page 8, optional)

★ colored pencils

★ two 6-sided dice marked 1–6

★ one 6-sided die marked 4–9

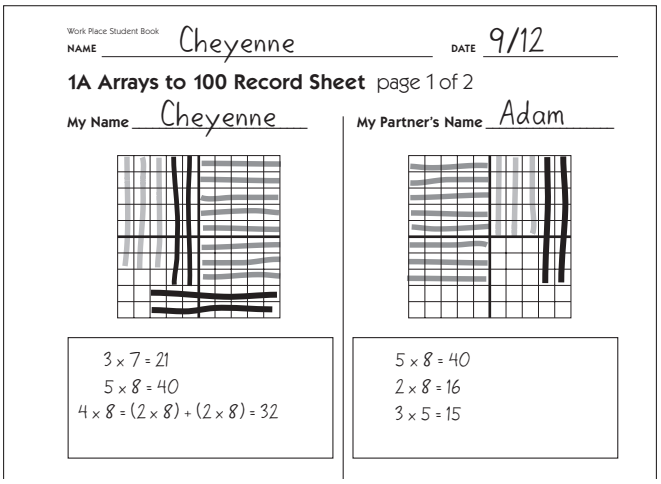
Instructions for Arrays to 100

1 Take turns rolling 1 die with your partner. The player who rolls the greatest number goes first. The object of the game is to fill in as much of your grid as possible *without going over 100*. You will each fill in your own record sheets.

2 Roll *any two* dice and use a colored pencil to quickly fill in an array with those dimensions. If you roll a 1, you can roll again to get a bigger number if you want.

3 In the box below the grid, write an equation that exactly matches the array. Get your partner's agreement that you have the correct product. You and your partner will need to fill in the grids for each other on your own record sheets.

4 As you fill in your grid, you might roll an array that won't fit in one place on your grid. You can break it into smaller arrays and write an equation that shows what you did. If you roll an array that can't fit in your grid, you lose your turn. If you lose 2 turns in a row, you lose the game.


Work Place Student Book
NAME Cheyenne DATE 9/12
1A Arrays to 100 Record Sheet page 1 of 2
My Name Cheyenne My Partner's Name Adam
3 × 7 = 21
5 × 8 = 40
4 × 8 = (2 × 8) + (2 × 8) = 32
5 × 8 = 40
2 × 8 = 16
3 × 5 = 15

Cheyenne rolled 4 × 8. It would not fit in her grid, so she broke the array into two smaller arrays: (2 × 8) + (2 × 8).

(Continued on back.)

Work Place 1A Instructions (cont.)

5 Both players can choose to stop rolling whenever they want to. The game is over when both players decide to stop rolling, or when one player loses.

6 Figure out how many squares each player filled in. Write a number sentence to show how you figured it out.

7 Circle the winner.

Work Place 1B Instructions

WORK PLACES

Spinning Around Multiplication

Each pair of students will need

★ Work Place 1B Instructions (Work Place Student Book, page 9)

★ 1B Spinning Around Multiplication (Work Place Student Book, pages 10 and 11)

★ 1B Spinning Around Multiplication: Challenge (Work Place Student Book, pages 12 and 13, optional)

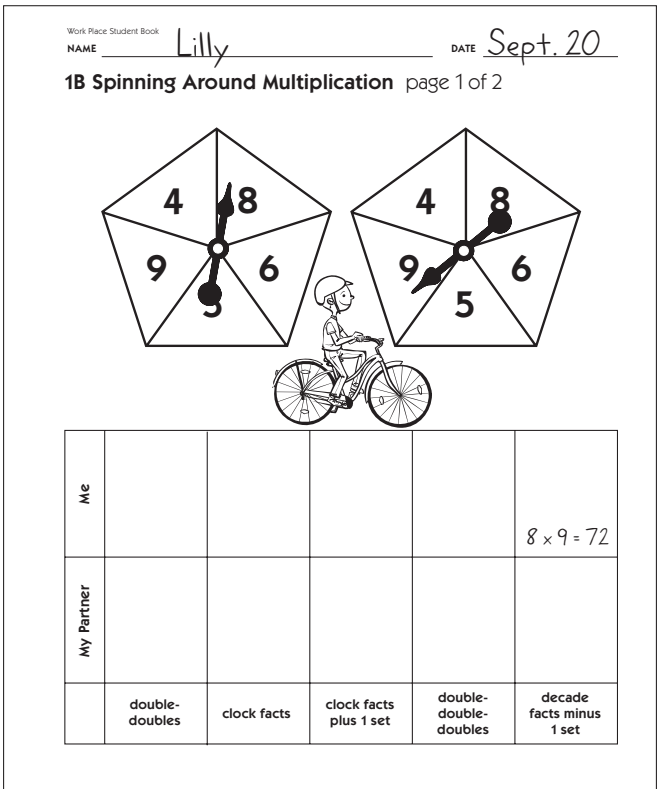
★ spinner overlay

Instructions for Spinning Around Multiplication

1 Each player needs his or her own record sheet. You will share a spinner overlay.

2 Take turns spinning both spinners. Each time, decide what kind of fact you spun. If a fact fits in two categories, pick just one category.

3 Write the fact in the column for the category you chose. Be sure to write an equation that shows the factors and the product.


Work Place Student Book
NAME Lilly DATE Sept. 20
1B Spinning Around Multiplication page 1 of 2

	double-doubles	clock facts	clock facts plus 1 set	double-double-doubles	decade facts minus 1 set
Me					8 × 9 = 72
My Partner					

I spun 8 and then 9. It could be double-double-doubles or decade minus 1 set. Decade minus 1 set is easier for me, though, so I wrote the number sentence in the last column.

4 Record the facts for yourself and for your partner.

5 Take turns until one player has at least 1 fact in each column. You could have more than one fact in some columns before you have a fact in every column.

Work Place 2A Instructions

WORK PLACES

Moolah on My Mind

Each pair of students will need

★ Work Place 2A Instructions (Work Place Student Book, pages 14 and 15)

★ 2A Moolah on My Mind Record Sheet (Work Place Student Book, pages 16–18)

★ single spinner overlay

★ two 6-sided dice marked 1–6

★ money value pieces (optional)

Instructions for Moolah on My Mind

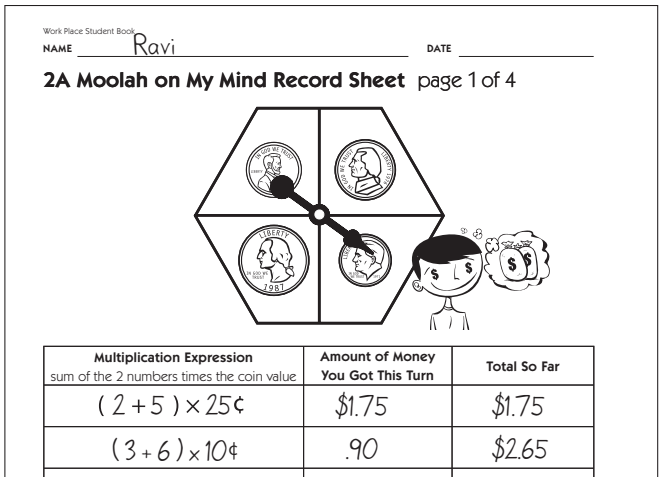
1 Take turns rolling the die with your partner. The player with the highest number goes first.

2 Roll both dice, add the two numbers, and then spin the coin spinner.

3 Write an expression in the first column to show the results of your rolls and spin.

4 Multiply to find out how much money you collected and write that amount in the second column. Write it again in the last column so you can keep a running total of your money.

5 Take turns with your partner. Help each other make sure that you are adding your money accurately. In other words, be sure each other's running totals are correct.



Work Place Student Book
NAME Ravi DATE

2A Moolah on My Mind Record Sheet page 1 of 4

Multiplication Expression sum of the 2 numbers times the coin value	Amount of Money You Got This Turn	Total So Far
(2 + 5) × 25¢	$1.75	$1.75
(3 + 6) × 10¢	.90	$2.65

6 When both players have taken 10 turns, the game is over and the player with the most money wins.

Variations

You can use the rules below to change the game.

1 The player with the least amount of money at the end of the game wins.

2 Pick two numbers and call them "take-aways," for example 4 and 7. If you roll 2 numbers that add up to one of your "take-aways" (like 3 + 4 = 7), spin the coin spinner, multiply the coin value by the take-away number,

(Continued on next page.)

Work Place 2A Instructions (cont.)

and take that amount of money away from your total, instead of adding it to your total.

CHALLENGE

3 Replace one of the 1–6 dice with a 5–10 die, or use two 5–10 dice instead. That way, you'll be multiplying and adding bigger numbers.

Work Place 2B Instructions

WORK PLACES

More or Less Multiplication

Each pair of students will need

★ Work Place 2B Instructions (Work Place Student Book, pages 19 and 20)

★ 2B More or Less Multiplication Record Sheet (Work Place Student Book, pages 21–23)

★ Large and Small Base Ten Grid Paper (Blacklines 2.2 and 2.3, optional)

★ two 6-sided dice marked 1–6

★ one 6-sided die marked 4–9

★ one more or less cube

★ colored pencils

★ calculators (optional)

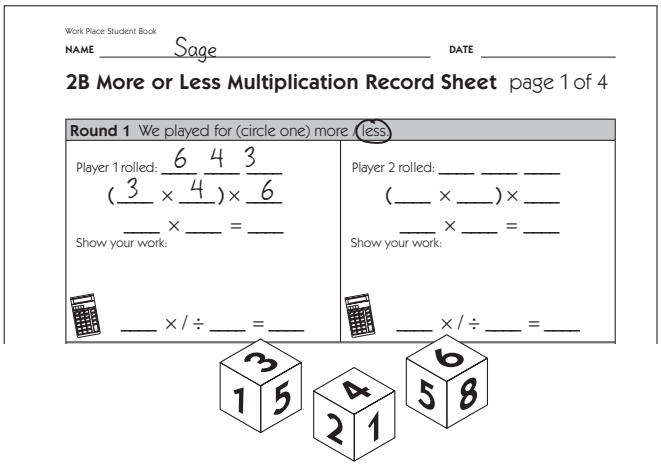
Instructions for More or Less Multiplcation

1 Take turns rolling the same die. The player with the higher number goes first.

2 Roll the more or less cube to see if you will play for more or for less. Circle the word *more* or *less* on your record sheet.

3 Roll the 3 dice and record the numbers on your record sheet. You are going to multiply these 3 numbers. Think about the best order to put them in (you can move the dice around to help).

4 Write an expression to show the order you will multiply the numbers. Write the 2 numbers you will multiply first inside the parentheses, and the third one outside the parentheses.

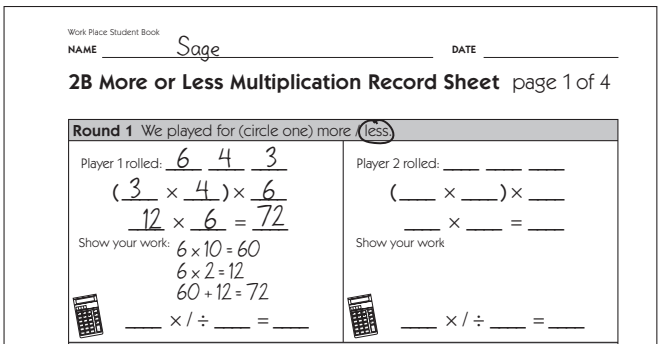


5 Now multiply the first two numbers inside the parentheses and write the product, along with the third number, on the next line.

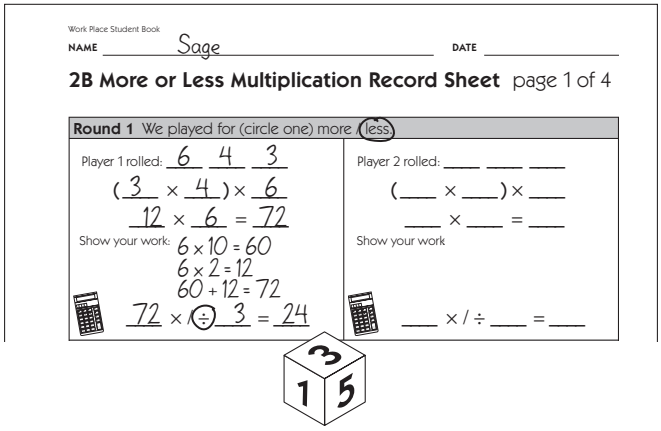
6 Find the product and show your work. Find a way to solve the problem that uses multiplication instead of repeated addition. You can use the Base Ten Grid Paper or the multiplication facts you know to help. You can't use the calculator for this part of the game, though.

(Continued on back.)

Work Place 2B Instructions (cont.)


Work Place Student Book
NAME Sage DATE
2B More or Less Multiplication Record Sheet page 1 of 4
Round 1 We played for (circle one) more / less
Player 1 rolled: 6 4 3
(3 × 4) × 6
12 × 6 = 72
Show your work: 6 × 10 = 60
6 × 2 = 12
60 + 12 = 72
___ × / ÷ ___ = ___
Player 2 rolled: ___ ___ ___
(___ × ___) × ___
___ × ___ = ___
Show your work
___ × / ÷ ___ = ___

7 The Last Toss Option: If you're not happy with your total, you can choose to roll the 1–6 die once, write the number in the box beside the little calculator, and then multiply or divide your total by that number. You can use a calculator to help you do this part.


Work Place Student Book
NAME Sage DATE
2B More or Less Multiplication Record Sheet page 1 of 4
Round 1 We played for (circle one) more / less
Player 1 rolled: 6 4 3
(3 × 4) × 6
12 × 6 = 72
Show your work: 6 × 10 = 60
6 × 2 = 12
60 + 12 = 72
72 × / ÷ 3 = 24
Player 2 rolled: ___ ___ ___
(___ × ___) × ___
___ × ___ = ___
Show your work
___ × / ÷ ___ = ___

8 Now it's your partner's turn. After your partner has found his or her total, compare your totals and circle the winner. (The lower total wins if you rolled "less" at the start of the round. The higher total wins if you rolled "more" at the start of the round.) Then play again.

Work Place 2C Challenge Instructions

WORK PLACES

Four 4's

Each pair of students will need

★ Work Place 2C Instructions (Work Place Student Book, page 24)

★ 2C Four 4's Record Sheet (Work Place Student Book, pages 25 and 26)

★ calculator (optional)

★ base four pieces (optional)

★ base ten pieces (optional)

Instructions for Four 4's

1 Create as many numbers as possible, following these rules:

- You must use exactly four 4's, no more and no less.
- You may not use any other digit.
- You may use any mathematical symbol. (+, –, ×, ÷, fraction bars, parentheses, or any other symbol you know)
- You can use any materials you want. (e.g., base four pieces, base ten pieces, a calculator)

Allowed

16 = 4 + 4 + 4 + 4

24 = (4 × 4) + 4 + 4

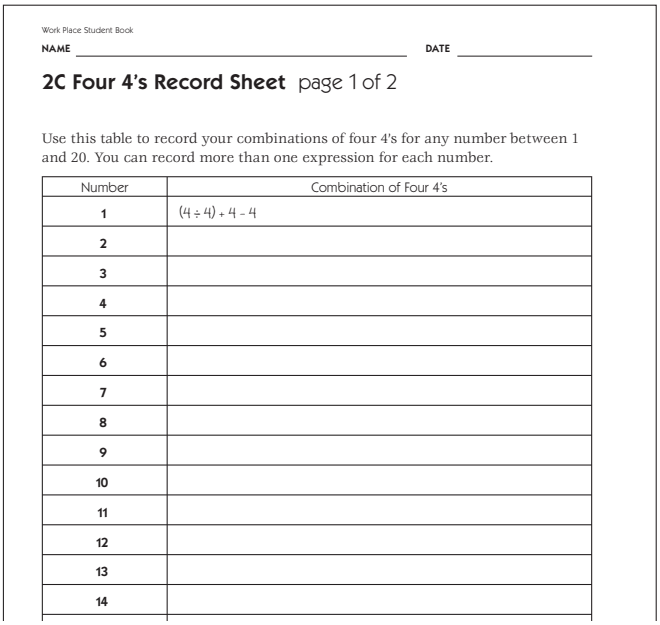
88 = 44 + 44

Not Allowed

12 = 4 + 4 + 4 (only three 4's used)

18 = 14 + 4 + 4 – 4 (uses a 1 in the number 14)

2 Record expressions for numbers from 1–20 on the first record sheet.



Work Place Student Book

NAME _____ DATE _____

2C Four 4's Record Sheet page 1 of 2

Use this table to record your combinations of four 4's for any number between 1 and 20. You can record more than one expression for each number.

Number	Combination of Four 4's
1	(4 ÷ 4) + 4 – 4
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	

3 Create as many different expressions using four 4's as you can. Remember that you can use all 4 operations: addition, subtraction, multiplication, and division. Record all the different expressions (even if they equal the same number) on the record sheets. You may not be able to come up with ways to get some of the numbers on the first record sheet. They are all possible, but some of them are very difficult.

Work Place 3A Instructions

WORK PLACE 3A

Dozens of Eggs

Each pair of students will need

- ★ Work Place 3A Instructions (Work Place Student Book, pages 27 and 28)
- ★ 3A Fractions Cards (Work Place Student Book, pages 29–34)
- ★ 3A Dozens of Eggs Record Sheet (Work Place Student Book, pages 35 and 36)
- ★ 12 tile
- ★ 1 egg carton
- ★ 6 ten-inch lengths of string or yarn
- ★ colored pencils or crayons
- ★ scissors

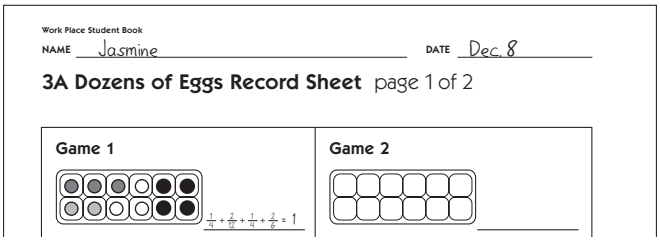
Instructions for Dozens of Eggs

1 Begin by cutting out one player's Fractions Cards and placing them in a pile face down. Take turns drawing a card. The player with the larger fraction goes first. (Build your fractions on your egg cartons if you can't tell which is larger.)

2 Return the cards to the deck. Then draw the next card from the top of the deck.

3 Say the fraction out loud for your partner to hear and then use the string and tile to build a model of the fraction in the egg carton.

4 If your partner agrees that you showed the fraction correctly in the egg carton, draw circles to represent that number of eggs in one of the diagrams on your record sheet and write the fraction beside the diagram. Draw only the eggs. You do not need to draw the strings.


Work Place Student Book
NAME Jasmine DATE Dec. 8
3A Dozens of Eggs Record Sheet page 1 of 2
Game 1 Game 2

After your partner agrees that you drew the correct number of eggs and wrote the correct fraction, empty the

(Continued on back.)

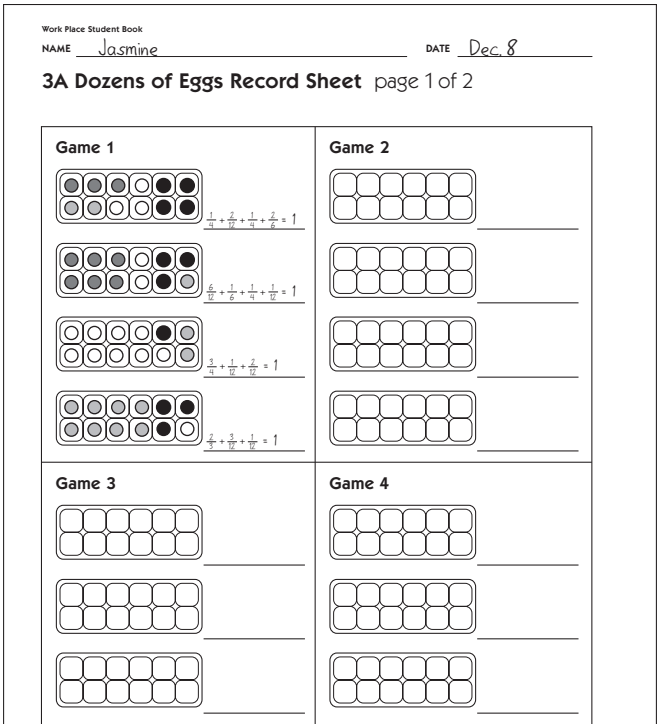
Work Place 3A Instructions (cont.)

real egg carton, return your card to the deck, and mix up the cards.

5 Take turns with your partner until one person has filled in all four cartons on his or her record sheet. Every time you record a new group of eggs in a carton, use a different color pencil or crayon.

6 Every time you take a new turn, you must put all of the eggs in a single carton. Sometimes this means you will put the eggs in a new carton without filling the carton before it. Towards the end of the game, you'll need to skip that turn if you can't fit the eggs into any of your cartons.

7 Each time you fill an egg carton, write plus signs (+) between all the fractions next to that diagram and write = 1 at the end of the row of fractions.


Work Place Student Book

NAME Jasmine DATE Dec. 8

3A Dozens of Eggs Record Sheet page 1 of 2

Game 1

$\frac{1}{4} + \frac{2}{12} + \frac{1}{4} + \frac{2}{6} = 1$

$\frac{6}{12} + \frac{1}{6} + \frac{1}{4} + \frac{1}{12} = 1$

$\frac{3}{4} + \frac{1}{12} + \frac{2}{12} = 1$

$\frac{2}{3} + \frac{3}{12} + \frac{1}{12} = 1$

Game 2

Game 3

Game 4

Work Place 3B Instructions

WORK PLACE 3B

Fractions of a Foot Scavenger Hunt

Each pair of students will need

★ Work Place 3B Instructions (Work Place Student Book, page 37)

★ 3B Fractions of a Foot Scavenger Hunt Record Sheet (Work Place Student Book, page 38)

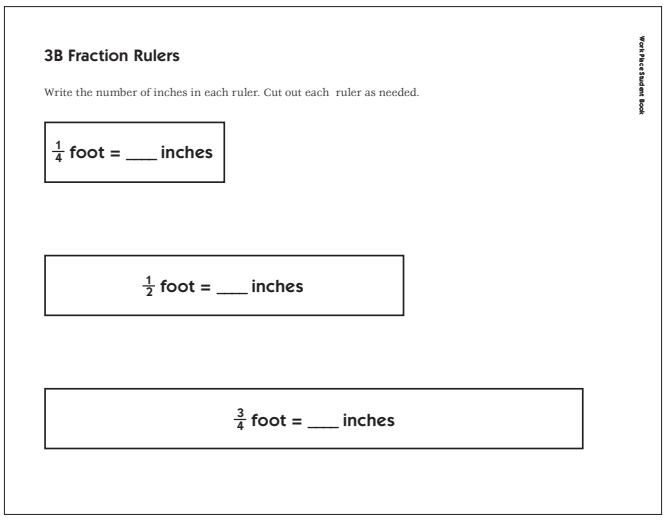
★ 3B Fraction Rulers (Work Place Student Book, pages 39 and 40)

★ scissors

★ 12-inch ruler

Instructions for Fractions of a Foot Scavenger Hunt

1 Measure each of the three fraction rulers on page 39 and write the length in inches for each ruler in the blank space provided.



3B Fraction Rulers

Write the number of inches in each ruler. Cut out each ruler as needed.

Work Place Student Book

$\frac{1}{4}$ foot = ___ inches

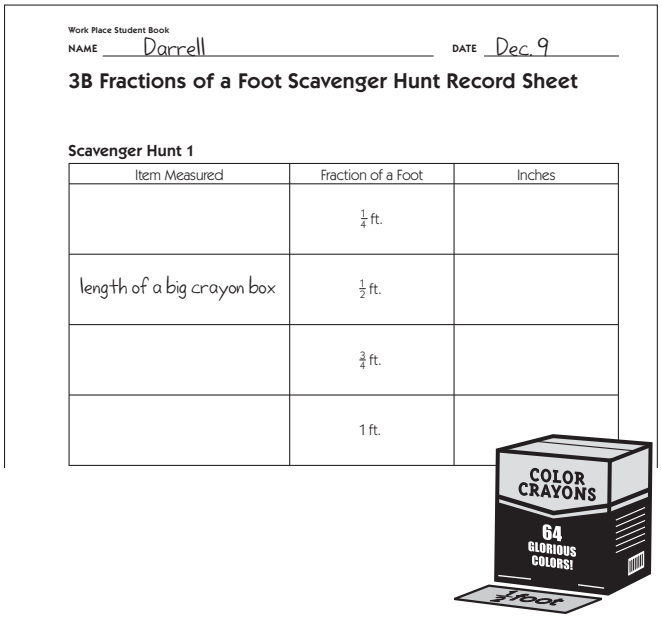
$\frac{1}{2}$ foot = ___ inches

$\frac{3}{4}$ foot = ___ inches

2 Cut out the three fraction rulers. When you are done cutting, put your scissors away and put the leftover scraps of paper in the recycling bin.

3 Write your name and the date at the top of the Fractions of a Foot Scavenger Hunt Record Sheet.

4 Find items that are the same length as each paper fraction ruler. Use a real ruler to find objects that are about 1 foot long. Record the items and their lengths in inches on the record sheet. Be clear about what item you measured. For example, if you measured a box of crayons, tell whether you measured the length of the box, the height of the box, or the width or depth of the box.



Work Place Student Book

NAME Darrell DATE Dec. 9

3B Fractions of a Foot Scavenger Hunt Record Sheet

Scavenger Hunt 1

Item Measured	Fraction of a Foot	Inches
	$\frac{1}{4}$ ft.	
length of a big crayon box	$\frac{1}{2}$ ft.	
	$\frac{3}{4}$ ft.	
	1 ft.	

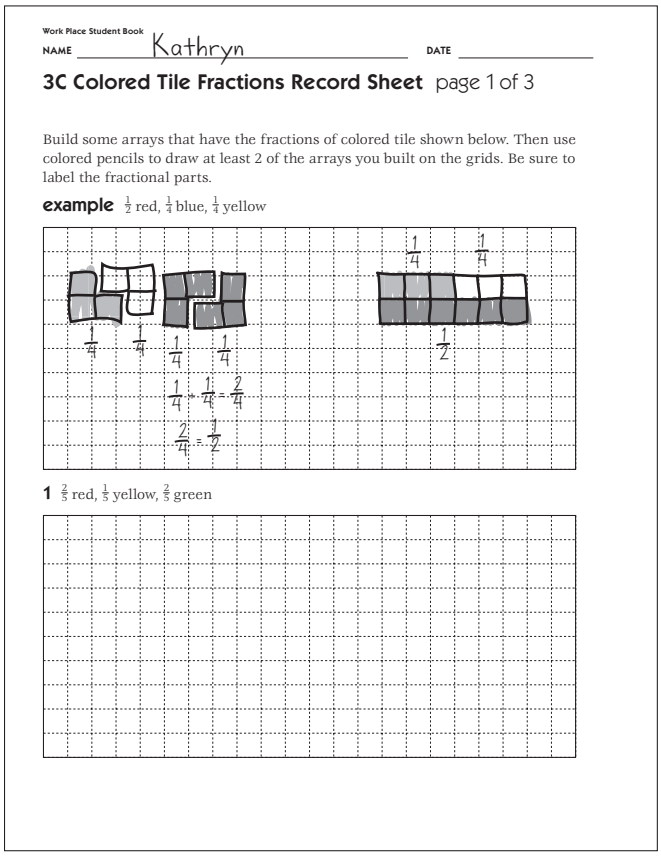
Work Place 3C Instructions

WORK PLACE 3C

Colored Tile Fractions

Each pair of students will need

- ★ Work Place 3C Instructions (Work Place Student Book, page 41)
- ★ 3C Colored Tile Fractions Record Sheet (Work Place Student Book, pages 42–44)
- ★ 3C Colored Tile Fractions Challenge (Work Place Student Book, page 45)
- ★ colored tile
- ★ colored pencils in red, blue, yellow, and green


Work Place Student Book
NAME Kathryn DATE
3C Colored Tile Fractions Record Sheet page 1 of 3
Build some arrays that have the fractions of colored tile shown below. Then use colored pencils to draw at least 2 of the arrays you built on the grids. Be sure to label the fractional parts.
example $\frac{1}{2}$ red, $\frac{1}{4}$ blue, $\frac{1}{4}$ yellow
1 $\frac{2}{5}$ red, $\frac{1}{5}$ yellow, $\frac{2}{5}$ green

Instructions for Colored Tile Fractions

Follow the instructions on the record sheet to build and record arrays with different fractions of red, yellow, and blue tile.

Work Place 3D Instructions

WORK PLACE 3D

Remainders Win

Each pair of students will need

★ Work Place 3D Instructions (Work Place Student Book, page 46)

★ 3D Remainders Win Record Sheet (Work Place Student Book, pages 47–49)

★ 1 die marked 4–9

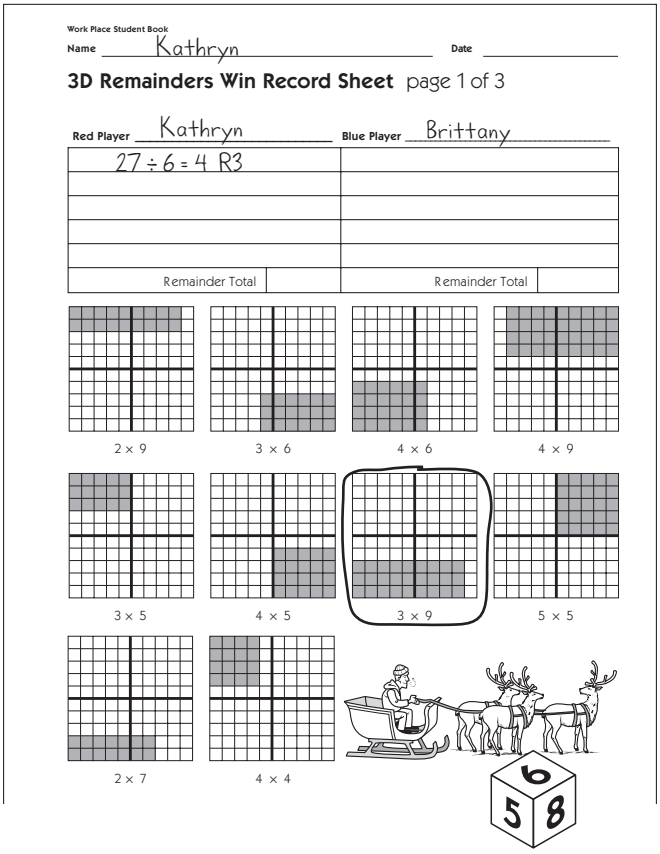
★ red and blue colored pencils

Instructions for Remainders Win

1 Take turns rolling the die to see who will go first. Write your names on the record sheet. The first player will circle arrays in red, and the second player will circle arrays in blue.

2 The first player circles an array and finds the product.

3 The first player rolls the die and divides the product by that number. He or she writes the division sentence in the first box on the record sheet.



4 Player 2 repeats steps 1 and 2.

5 Take turns until each player has written 5 equations.

6 Both players add up their remainders. The player with the highest total wins.

CHALLENGE

Roll two dice (two 1–6 dice, two 4–9 dice, or one of each), add the two numbers, and then divide your product by that number.

Work Place 3E Instructions

WORK PLACE 3E

Line 'Em Up

Each pair of students will need

★ Work Place 3E Instructions (Work Place Student Book, pages 50)

★ 3E Line 'Em Up Record Sheet (Work Place Student Book, pages 51 and 52)

★ one 1–6 die and one 4–9 die

★ tile and red linear pieces

★ base ten area and linear pieces

Instructions for Line 'Em Up

1 Take turns rolling one of the dice to see who goes first. Write your names on the record sheet.

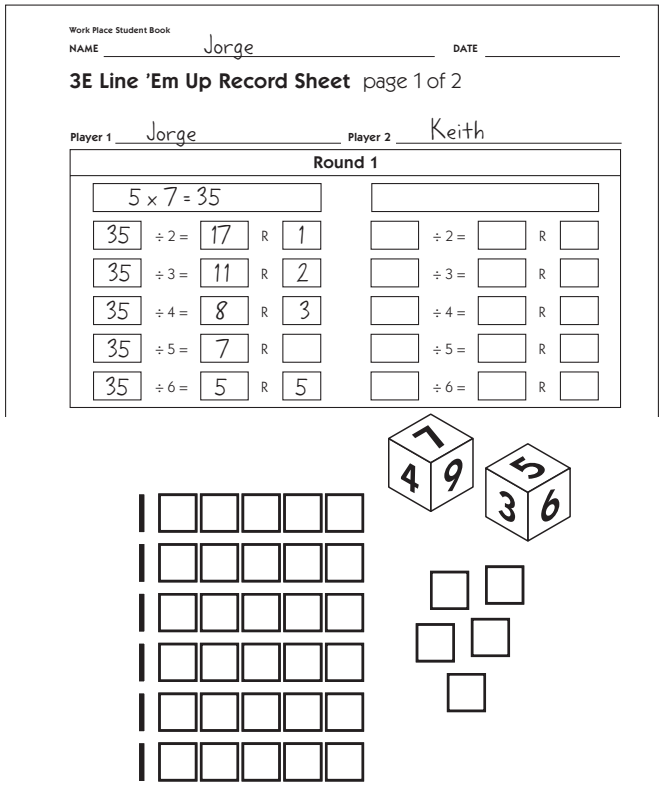
2 Roll both dice and multiply the two numbers.

3 Write an equation to show the product.

4 Now count out that many tile and imagine that they are the bugs in your squadron.

5 Divide them into 2 lines first. Then divide them into 3, 4, 5, and 6 lines. Use red linear pieces each time to show the number of lines you're making.

6 Each time, record an equation showing the division. Make sure your partner is helping you and agrees with your equations.


Work Place Student Book
NAME Jorge DATE
3E Line 'Em Up Record Sheet page 1 of 2
Player 1 Jorge Player 2 Keith
Round 1

5 × 7 = 35											
35	÷ 2 =	17	R	1		÷ 2 =		R			
35	÷ 3 =	11	R	2		÷ 3 =		R			
35	÷ 4 =	8	R	3		÷ 4 =		R			
35	÷ 5 =	7	R			÷ 5 =		R			
35	÷ 6 =	5	R	5		÷ 6 =		R			

7 The second player repeats steps 2–6.

8 After both players have gone twice, add up all your remainders. The player with the higher total wins.

Work Place 4A Instructions

WORK PLACE 4A

Missouri Squares

Each pair of students will need

★ Work Place 4A Instructions (Work Place Student Book, page 53)

★ 4A Missouri Squares Record Sheet (Work Place Student Book, pages 54 and 55)

★ 2 geoboards and geobands

★ game markers in 2 colors

★ 1–6 die

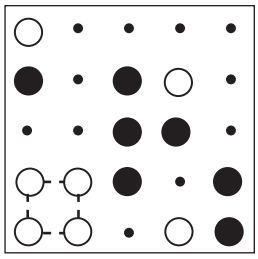
★ crayons to match the colors of their game markers

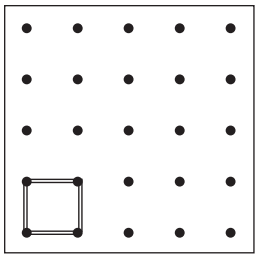
Instructions for Missouri Squares

1 Turn over one geoboard and keep one turned right side up. Each player chooses a game marker color. Take turns rolling the die to see who will go first.

2 Each player takes turns placing one game marker on top of one peg of the upside down geoboard. The goal is to be first to mark the 4 vertices of any square.

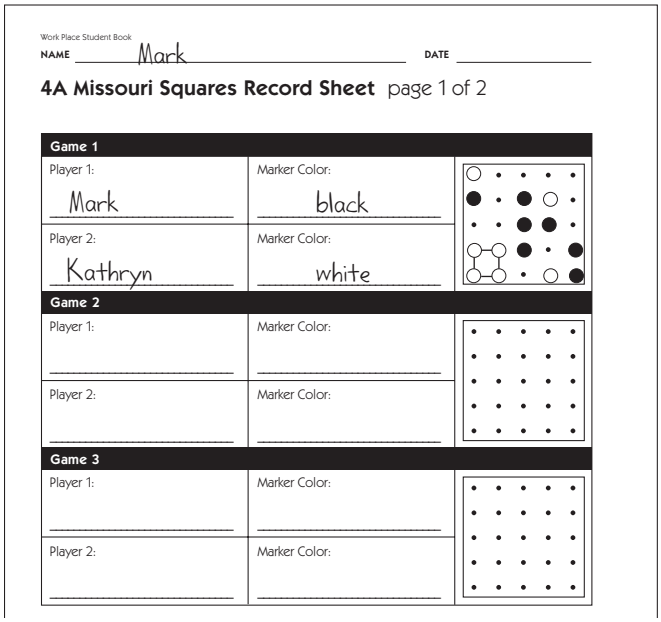
3 If you mark the 4 vertices of a square, say, "Missouri Square." Then your partner says, "Show me." (Missouri is called the "Show Me" state.) Prove that you made a square by stretching a geoband around the pegs on the other geoboard. If you can't prove that you made a square, the game continues until you or your partner proves that 4 of your game markers make a square.





4 Once either player makes and proves a square, the game is over.

5 When the game is over, use your crayons to record where you and your partner placed your markers on the record sheet.



Work Place Student Book

NAME Mark DATE

4A Missouri Squares Record Sheet page 1 of 2

Game 1		
Player 1: Mark	Marker Color: black	
Player 2: Kathryn	Marker Color: white	
Game 2		
Player 1:	Marker Color:	
Player 2:	Marker Color:	
Game 3		
Player 1:	Marker Color:	
Player 2:	Marker Color:	

In this game, Player 2 wins!

Work Place 4B Instructions

WORK PLACE 4B

Area Bingo

Each pair of students will need

★ Work Place 4B Instructions (Work Place Student Book, page 56)

★ 4B Bingo Boards (Work Place Student Book, pages 57 and 58)

★ 4B Geoboard Figure Cards (Work Place Student Book, pages 59–64)

★ 2 geoboards and geobands

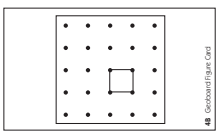
★ scissors

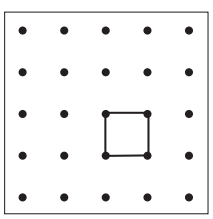
Instructions for Area Bingo

1 Both players turn to pages 57 and 58 and select one of the bingo boards. Players must select different boards.

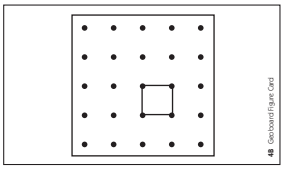
2 Cut out all of one partner's Geoboard Figure Cards. Turn them over and place them face down in a pile.

3 Take the first Geoboard Figure Card from the top of the pile. Work together to determine the area of the figure shown. Make the figure on your own geoboards to double-check the area if you need to.





4 If the value of the area appears on your board, shade in or draw an X on that space on your board. Place the Geoboard Figure Card face down on the bottom of the pile.



Work Place Student Book
NAME Amanda DATE

4B Area Bingo Boards page 1 of 2

Board 1			
X	$4\frac{1}{2}$	14	8
$13\frac{1}{2}$	$6\frac{1}{2}$	6	$10\frac{1}{2}$
4	$1\frac{1}{2}$	7	15
$2\frac{1}{2}$	3	$3\frac{1}{2}$	$8\frac{1}{2}$

Board 2			
7	$\frac{1}{2}$	6	$4\frac{1}{2}$
$14\frac{1}{2}$	$9\frac{1}{2}$	$3\frac{1}{2}$	11
1	14	$10\frac{1}{2}$	4
$6\frac{1}{2}$	$12\frac{1}{2}$	5	$1\frac{1}{2}$

Work Place Student Book
NAME Jamie DATE

4B Area Bingo Boards page 1 of 2

Board 1			
1	$4\frac{1}{2}$	14	8
$13\frac{1}{2}$	$6\frac{1}{2}$	6	$10\frac{1}{2}$
4	$1\frac{1}{2}$	7	15
$2\frac{1}{2}$	3	$3\frac{1}{2}$	$8\frac{1}{2}$

Board 2			
7	$\frac{1}{2}$	6	$4\frac{1}{2}$
$14\frac{1}{2}$	$9\frac{1}{2}$	$3\frac{1}{2}$	11
X	14	$10\frac{1}{2}$	4
$6\frac{1}{2}$	$12\frac{1}{2}$	5	$1\frac{1}{2}$

5 Repeat Steps 3 and 4 until one player gets 4 markers in a row horizontally, vertically, or diagonally.

Work Place 4C Instructions

WORK PLACE 4C

Mosaic Game

Each pair of students will need

★ Work Place 4C Instructions (Work Place Student Book, page 65)

★ 4C Pattern Block Key (Work Place Student Book, page 66)

★ 4C Mosaic Game Record Sheet (Work Place Student Book, pages 67–69)

★ 4C Mosaic Game Challenge Sheet (Work Place Student Book, page 70)

★ 1–6 die

★ pattern blocks

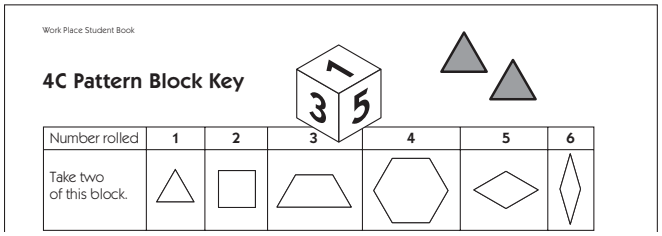
★ pattern block stencils

★ tape

Instructions for the Mosaic Game

1 Take turns rolling the die to see who will go first.

2 Roll the die 3 times. For each roll, take a pair of pattern blocks. The Pattern Block Key on page 66 shows which pair of pattern blocks to take for each number on the die.

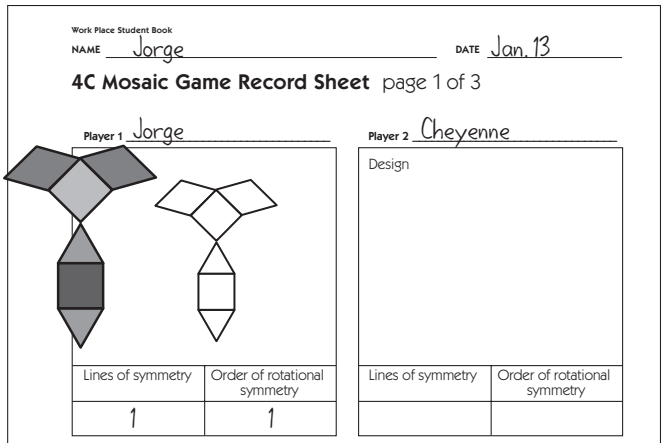

Work Place Student Book

4C Pattern Block Key

Number rolled	1	2	3	4	5	6
Take two of this block.						

3 Make a design with the 6 pattern blocks. You will get a point for every line of symmetry and order of rotational symmetry in your design. Tape the pattern blocks together if you need to rotate your shape to determine its order of rotational symmetry.

4 Draw the design on your record sheet. Use the pattern block stencil if you need to. Write the number of lines of symmetry and the order of rotational symmetry your design has.


Work Place Student Book

NAME Jorge DATE Jan. 13

4C Mosaic Game Record Sheet page 1 of 3

Player 1 Jorge

Lines of symmetry	Order of rotational symmetry
1	1

Player 2 Cheyenne

Design

Lines of symmetry	Order of rotational symmetry

5 Take turns until you and your partner have gone twice. Record the designs and scores for you and your partner. After 2 rounds, add together all your numbers. The player with the highest total score wins.

Work Place 4D Instructions

WORK PLACE 4D

Many Faces

Each pair of students will need

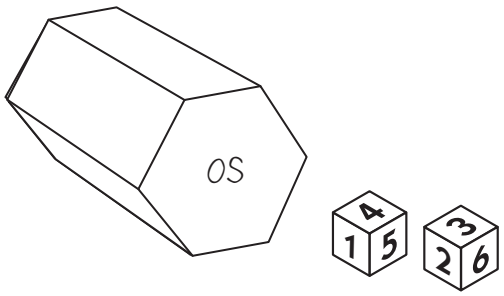
- ★ Work Place 4D Instructions (Work Place Student Book, pages 71 and 72)
- ★ 4D Geoblock Code Sheet (Work Place Student Book, page 73)
- ★ 4D Many Faces Record Sheet (Work Place Student Book, pages 74 and 75)
- ★ 2 dice marked 1–6
- ★ 1 set of geoblocks

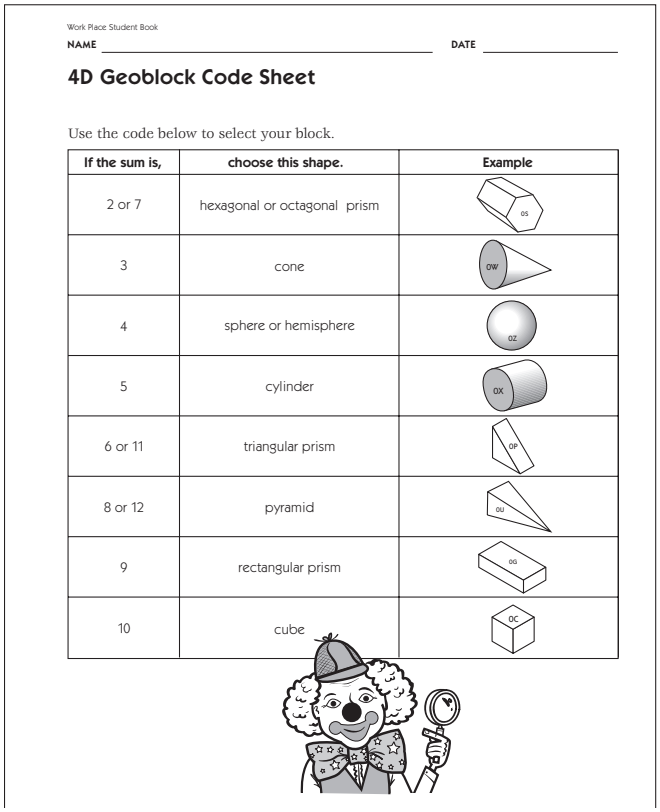
Instructions for Many Faces

1 Both partners will need their own record sheets. You can share a Geoblock Code Sheet and a set of geobocks.

2 Take turns rolling a die to see who will go first.

3 Roll both dice. On the record sheet, write the sum of the 2 numbers and look at the Geoblock Code Sheet to see what kind of geoblock you get.





Work Place Student Book

NAME _____ DATE _____

4D Geoblock Code Sheet

Use the code below to select your block.

If the sum is,	choose this shape.	Example
2 or 7	hexagonal or octagonal prism	OS
3	cone	OW
4	sphere or hemisphere	OZ
5	cylinder	OX
6 or 11	triangular prism	OP
8 or 12	pyramid	OU
9	rectangular prism	OG
10	cube	OC

4 Take one those shapes from the set of geoblocks and write its name in the next column on the record sheet.

5 Count the number of congruent faces (faces that have exactly the same size and shape) on your geoblock. Record the number of congruent faces on the record sheet. If there is more than one pair or set of congruent faces on the block, add them up.

(Continued on back.)

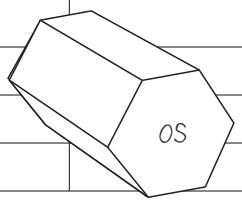
Work Place 4D Instructions (cont.)

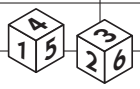
Work Place Student Book
NAME Raina DATE

4D Many Faces Record Sheet page 1 of 2

Player 1 Raina

Sum	Shape name	Total number of congruent faces
7	hexagonal prism–block OS	8





"Both of the hexagons are congruent, so that's 2. All the rectangular faces are congruent to each other, so that's 6 more. I've got 8 congruent faces altogether."

6 Return your block to the whole set.

7 Take turns until you have each had 5 turns. Then find your total number of congruent faces. The player with the highest total wins.

Work Place 6A Instructions

WORK PLACE 6A

Decimal More or Less

Each pair of students will need

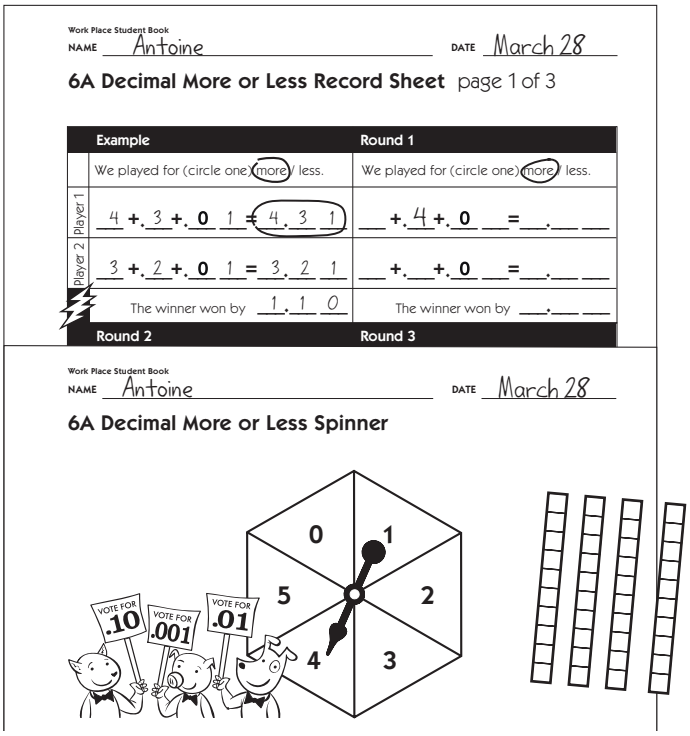
- ★ Work Place 6A Instructions (Work Place Student Book, pages 76 and 77)
- ★ 6A Decimal More or Less Spinner (Work Place Student Book, page 78)
- ★ 6A Decimal More or Less Record Sheet, pages 1–3 (Work Place Student Book, pages 79–81)
- ★ spinner overlay
- ★ more or less die
- ★ 2 sets of base ten pieces

Instructions for Decimal More or Less

1 Roll the more or less die to determine whether you will play for more or less in this round. Circle the word *more* or *less* on your record sheet.

2 Take turns spinning the spinner. The player with the larger number goes first.

3 The first player spins the spinner and decides whether to place that number in the ones, tenths, or hundredths place. Both players write the number in the appropriate place on their own record sheet and player 1 sets out base ten pieces to show the value of that number.



Work Place Student Book
NAME Antoine DATE March 28

6A Decimal More or Less Record Sheet page 1 of 3

	Example	Round 1
	We played for (circle one) more / less.	We played for (circle one) more / less.
Player 1	4 +. 3 +. 0 1 = 4. 3 1	___ +. 4 +. 0 ___ = ___. ___ ___
Player 2	3 +. 2 +. 0 1 = 3. 2 1	___ +. ___ +. 0 ___ = ___. ___ ___
	The winner won by 1. 1 0	The winner won by ___. ___ ___
	Round 2	Round 3

Work Place Student Book
NAME Antoine DATE March 28

6A Decimal More or Less Spinner

I got a 4, so I put it in the tenths. We're playing for more, so I could still get a 5 to put in the ones place. I put out 4 striplets to show four-tenths.

4 Players take turns until they have each taken 3 spins. Each time, players decide where to place their numbers and set out base ten pieces to show the value of that number. Once they have made their decisions, they cannot change their minds.

5 After both players have had three turns to spin, build, and record, mark the winner for the round. For an extra challenge, subtract the high score

(Continued on next page.)

Work Place 6A Instructions (cont.)

from the low score to determine how much the winner won by.

6 Play the game again. Remember to roll the more or less die before each new round so you know if you're playing for more or less.

Work Place 6B Instructions

WORK PLACE 6B

Fractions, Decimals & Dollars

Each pair of students will need

★ Work Place 6B Instructions (Work Place Student Book, pages 82 and 83)

★ 6B Fractions Spinner (Work Place Student Book, page 84)

★ 6B Fractions, Decimals & Dollars Record Sheet, pages 1–3 (Work Place Student Book, pages 85–87)

★ set of money value pieces

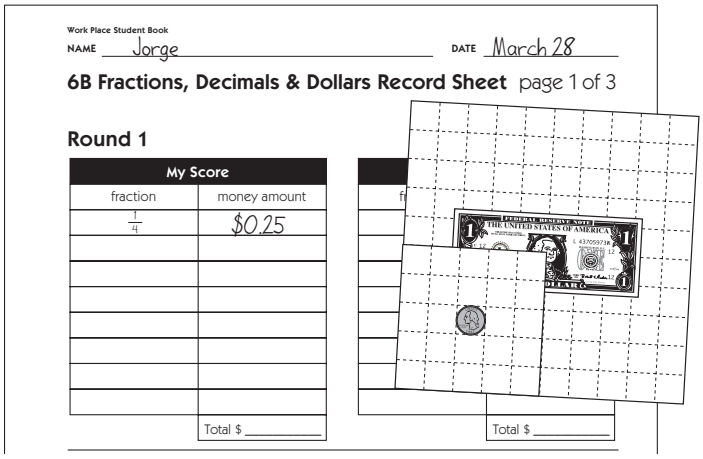
★ spinner overlay

Instructions for Fractions, Decimals & Dollars

1 Each player gets a dollar money value piece to use as a playing mat.

2 Take turns spinning the fractions spinner. The player with the largest amount goes first.

3 Player 1 spins the fraction spinner. She or he takes out a money value piece or collection of pieces that is worth that fraction of a dollar and puts that piece or pieces on his or her dollar piece. Then she or he writes the decimal money amount that is equal to the fraction. Player 2 also records Player 1's fraction and money amount on his or her record sheet.


Work Place Student Book
NAME Jorge DATE March 28
6B Fractions, Decimals & Dollars Record Sheet page 1 of 3
Round 1
My Score
fraction | money amount
1/4 | $0.25
Total $ _____
Total $ _____

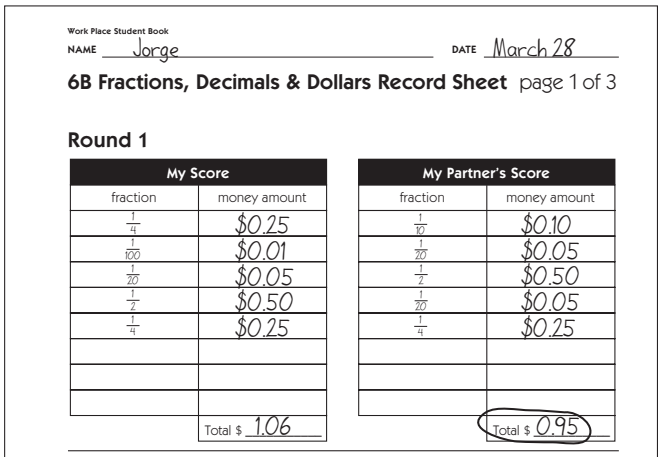
4 Players take turns spinning, building, and recording until one player's dollar piece is completely filled. It is fine to go over a dollar. The other player gets to take his or her turn in that round, but no more rounds are played after one player has reached a dollar. To make the pieces fit on the dollar piece, players might need to rearrange or trade in money value pieces for other pieces that are worth the same amount.

5 Both players should find the total amount of money they collected in that round and write it at the bottom of their tables for the round.

6 The player whose total is closest to one dollar, either under or over, wins. Both players should circle the winner on their own record sheets.

(Continued on next page.)

Work Place 6B Instructions (cont.)



Work Place Student Book
NAME Jorge DATE March 28

6B Fractions, Decimals & Dollars Record Sheet page 1 of 3

Round 1

My Score	
fraction	money amount
$\frac{1}{4}$	$0.25
$\frac{1}{100}$	$0.01
$\frac{1}{20}$	$0.05
$\frac{1}{2}$	$0.50
$\frac{1}{4}$	$0.25
	Total $ 1.06

My Partner's Score	
fraction	money amount
$\frac{1}{10}$	$0.10
$\frac{1}{20}$	$0.05
$\frac{1}{2}$	$0.50
$\frac{1}{20}$	$0.05
$\frac{1}{4}$	$0.25
	Total $ 0.95

Player A filled her dollar but Player B wins the round because he came 1 cent closer to $1.00.

7 Play as many rounds as you have time for.

Work Place 6C Instructions

WORK PLACE 6C

Round & Add Tenths

Each pair of students will need

★ Work Place 6C Instructions (Work Place Student Book, page 88)

★ 6C Round Ball Tenths Record Sheet (Work Place Student Book, pages 89–91)

★ one 1–6 die and one 4–9 die

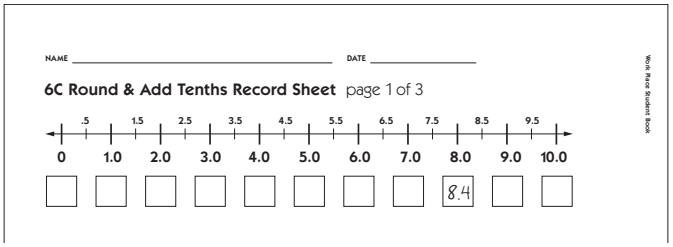
★ 2 red and 2 blue colored pencils

Instructions for Round & Add Tenths

1 Take turns rolling one of the dice. The player with the higher number goes first and will record his or her numbers in red. The other player will record his or her numbers in blue.

2 The first player rolls one 1–6 die and one 4–9 die. The player decides which number to put in the ones place and which number to put in the tenths place.

3 Then both players record that number under the whole number to which it rounds using a red pencil.



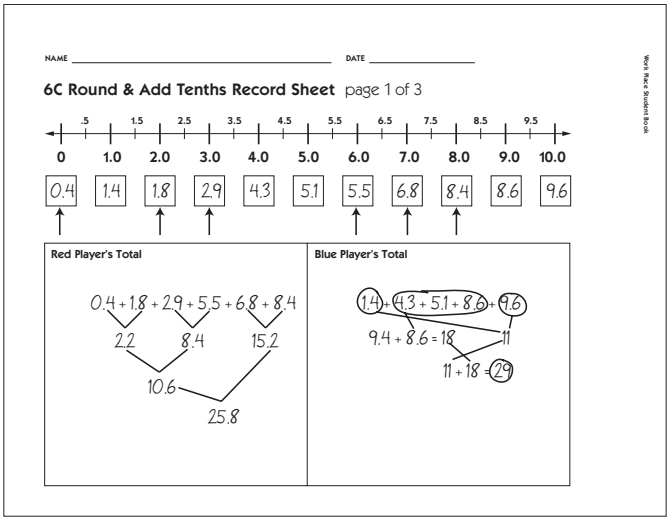
4 Players take turns rolling the dice and making and rounding numbers. If you can't make a number that rounds to an unclaimed whole number, you lose that turn. Throughout the game, both players record their own and their partner's numbers. Remember that player 1's numbers are red and player 2's numbers are blue.

5 At any point in the game, either player can roll 1 die to claim the 0 or 1.

6 Once all the whole numbers have been claimed, predict who will win.

7 Add up your own decimal numbers to find your total score. Explain to your partner how you added the numbers. Check each other's work to make sure you agree both totals are correct.

8 The highest score wins. Circle the winning score on your record sheet.



Work Place 6D Instructions

WORK PLACE 6D

Decimal Race to Three

Each pair of students will need

★ Work Place 6D Instructions (Work Place Student Book, page 92)

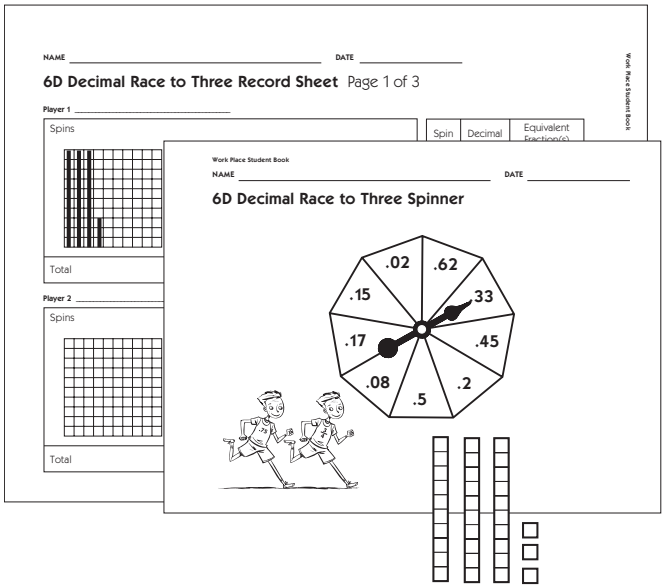
★ 6D Decimal Race to Three Spinner (Work Place Student Book, page 93)

★ 6D Decimal Race to Three Record Sheet (Work Place Student Book, pages 94–96)

★ spinner overlay

★ 2 sets of base ten pieces

★ colored pencils



Instructions for Decimal Race to Three

1 Take turns spinning the spinner. The player with the larger number goes first.

2 Player 1 spins the spinner. He or she quickly shades in that amount on his or her first grid. (Player 1 can build the decimal number shown on the spinner first with base ten pieces if he or she wants to.) Player 2 should also shade in this amount for Player 1 on his or her own record sheet.

3 Then Player 1 names a fraction that is equal to that decimal number. Both players record the fraction.

4 Players work together to see if they can think of any other fractions that are also equal to that number. If so, they both record them on their record sheets.

5 Players take turns spinning, shading in, and thinking of equivalent fractions until both players have taken 4 turns.

6 Each player determines his or her total and then writes an equation to show the sum of their decimal amounts. The player with the largest sum wins.

7 Both players circle the winner and then play again if there is time.

Work Place 7A Instructions

WORK PLACE 7A

Odd One Out

Each pair of students will need

★ Work Place 7A Instructions (Work Place Student Book, page 97)

★ 7A Odd One Out Record Sheet (Work Place Student Book, pages 98–100)

★ game markers

Instructions for Odd One Out

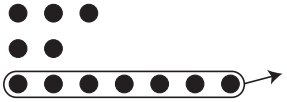
1 Set up 15 game markers in 3 rows like this.

2 Decide who will be Player 1 and who will be Player 2. Player 1 goes first.

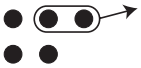
3 Each time you take a turn, you get to remove some markers from one of the rows. You can take anywhere between 1 and all of the markers in a single row. You cannot take markers away from more than 1 row at a time.

4 Take turns back and forth, and record your moves on the record sheet. The player who takes the last marker(s) wins.

1st move: 3 from middle



2nd move: 7 from bottom



3rd move: 2 from top

4th move: 1 from middle

5th move: 1 from middle

6th move: 1 from top to win!

NAME Cheyenne DATE

7A Odd One Out Record Sheet page 1 of 3

1 Use the grids below to record 3 of your games.

Game 1		
	Player 1	Player 2
number removed	3	7
from which row?	middle	bottom
number removed	2	1
from which row?	top	middle
number removed	1	1
from which row?	middle	top
number removed		
from which row?		
number removed		
from which row?		

Game 2		
	Player 1	Player 2
number removed		
from which row?		
number removed		
from which row?		
number removed		
from which row?		
number removed		
from which row?		
number removed		
from which row?		

Game 3		
	Player 1	Player 2
number removed		
from which row?		
number removed		
from which row?		
number removed		
from which row?		
number removed		
from which row?		
number removed		
from which row?		

2 What advice could you give someone about how to win this game (things to do and things not to do)?

Work Place 6 Student Book

Work Place 7B Instructions

WORK PLACE 7B

What's My Rule?

Each pair of students will need

★ Work Place 7B Instructions (Work Place Student Book, page 101)

★ 7B What's My Rule? Record Sheet (Work Place Student Book, pages 102 and 103)

Instructions for What's My Rule?

1 Find a partner and turn to the first 7B What's My Rule? Record Sheet.

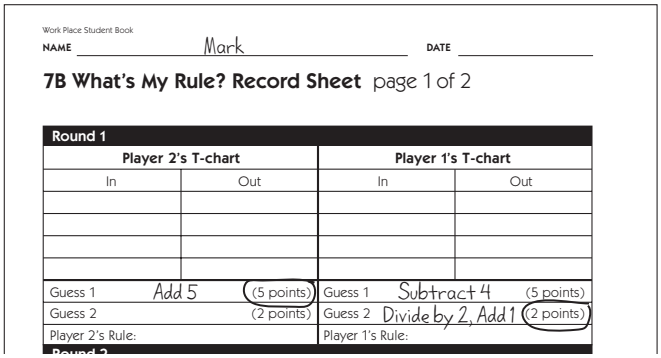
2 Think of a mathematical rule for transforming numbers. Examples of rules would be add 3, multiply by 2, or even divide by 2 and then add 1.

3 On your record sheet, create a chart of in and out numbers. You get your out numbers by applying the rule to each in number. You don't have to start with 1 as your first in number, and it is fine to skip numbers. Make sure you follow your own rule to get all the out numbers.

4 Have your partner study your chart and write his or her first guess about your rule on the record sheet. If the guess is correct, your partner scores 5 points. If it's not correct, ask your partner to write his or her second guess on the record sheet. It it's correct, your partner scores 2 points. If it's not correct, write your rule on the third line for your partner to see.

Keep in mind that your partner might see the rule differently than you do. If the rule he or she guesses works for every pair of in and out numbers, he or she gets the points.

5 Now switch and try to guess your partner's rule.



Work Place Student Book

NAME Mark DATE

7B What's My Rule? Record Sheet page 1 of 2

Round 1			
Player 2's T-chart		Player 1's T-chart	
In	Out	In	Out
Guess 1 Add 5 (5 points)		Guess 1 Subtract 4 (5 points)	
Guess 2 (2 points)		Guess 2 Divide by 2, Add 1 (2 points)	
Player 2's Rule:		Player 1's Rule:	

6 The player with the most points after 3 rounds is the winner. Record your scores at the bottom of the sheet.

Work Place 7C Instructions

WORK PLACE 7C

What's Missing? Bingo

Each pair of students will need

★ Work Place 7C Instructions (Work Place Student Book, page 104)

★ 7C What's Missing? Bingo Cards (Work Place Student Book, pages 105–108)

★ 7C What's Missing? Bingo Challenge Cards (Work Place Student Book, pages 109–112)

★ 7C What's Missing? Bingo Boards (Work Place Student Book, pages 113 and 114)

★ scissors

Instructions for What's Missing? Bingo

1 Pick one bingo board that is different from your partner's. Cut out the deck of cards from one player's Work Place Student Book and then put the cards between you in a stack, face down. Decide who will go first using any method you wish

2 Draw a card. Look at the equation or number sentence on the card and determine what is missing. Talk to your partner about it and make sure you agree.

3 Draw an X over the missing number or symbol on your bingo board. (Remember to have each partner use just one bingo board at a time.)

4 Take turns drawing cards until one player has 4 X's in a row to win.