Game Masters

Name Date Time

***Factor Captor* 1–110 Grid**

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110

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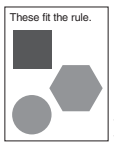
Name Date Time

What's My Attribute Rule?

Directions

1. Label one sheet of paper ***These fit the rule.***
2. Label another sheet of paper ***These do NOT fit the rule.***
3. Take turns. Roll the six-sided die once. The player with the lowest number is the first "Rule Maker."
4. The Rule Maker shuffles and places the Attribute Rule Cards facedown.
5. The Rule Maker turns over the top Attribute Rule Card, but does not show it to the other players or tell them what the rule is. For example: *large shapes, but not triangles.*
6. The Rule Maker chooses 3 or 4 attribute blocks that fit the rule on the card. The Rule Maker puts them on the sheet labeled *These fit the rule.*

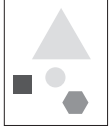
These fit the rule.



These fit the rule.

7. The Rule Maker chooses 3 or 4 blocks that do NOT fit the rule. The Rule Maker puts them on the sheet labeled *These do NOT fit the rule.*

These do NOT fit the rule.



These do NOT fit the rule.

8. The other players take turns choosing a block that they think might fit the rule and placing it on that sheet.
9. If the Rule Maker says "No," the player puts the block on the correct sheet. If "Yes," the player gets to suggest what the rule might be. The Rule Maker then tells the player whether his or her rule is correct.
10. The round continues until someone figures out the rule. That person becomes the Rule Maker for the next round.

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Name Date Time

Algebra Election Gameboard

NOTE: Alaska and Hawaii are not drawn to scale.

Name Date Time

Algebra Election Gameboard *continued*

*If your marker does not fit on the state, put your marker on the state's name.

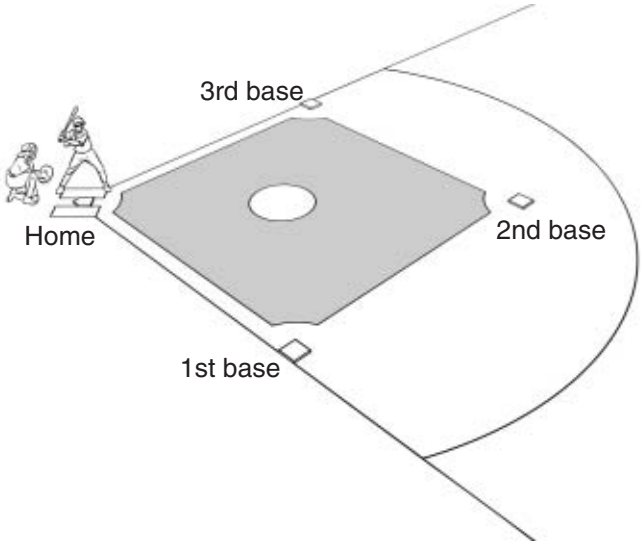
Name Date Time

Angle Tangle Record Sheet

Round	Angle	Estimated measure	Actual measure	Score
1		_____°	_____°	
2		_____°	_____°	
3		_____°	_____°	
4		_____°	_____°	
5		_____°	_____°	
			Total Score	

Name Date Time

Baseball Multiplication Game Mat



Hitting Table
1-to-6 Facts

1 to 9	Out
10 to 19	Single (1 base)
20 to 29	Double (2 bases)
30 to 35	Triple (3 bases)
36	Home Run (4 bases)

Inning		1	2	3	Total
Team 1	Outs				
	Runs				
Team 2	Outs				
	Runs				

Inning		1	2	3	Total
Team 1	Outs				
	Runs				
Team 2	Outs				
	Runs				

Inning		1	2	3	Total
Team 1	Outs				
	Runs				
Team 2	Outs				
	Runs				

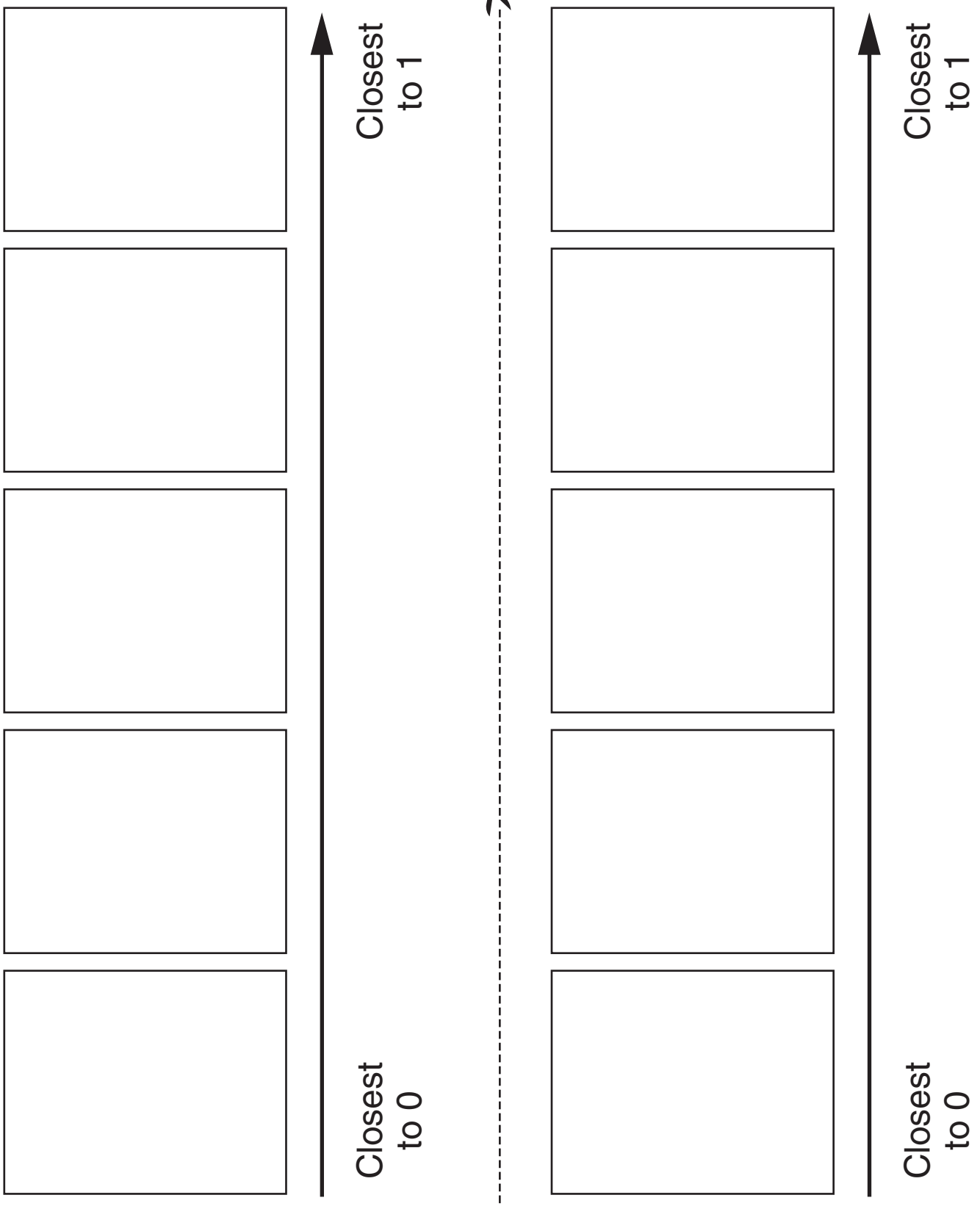
Name Date Time

Build-It Card Deck

$\frac{5}{9}$	$\frac{1}{3}$	$\frac{11}{12}$	$\frac{1}{12}$
$\frac{7}{12}$	$\frac{3}{8}$	$\frac{1}{4}$	$\frac{1}{5}$
$\frac{2}{3}$	$\frac{3}{7}$	$\frac{4}{7}$	$\frac{3}{4}$
$\frac{3}{5}$	$\frac{4}{5}$	$\frac{7}{9}$	$\frac{5}{6}$

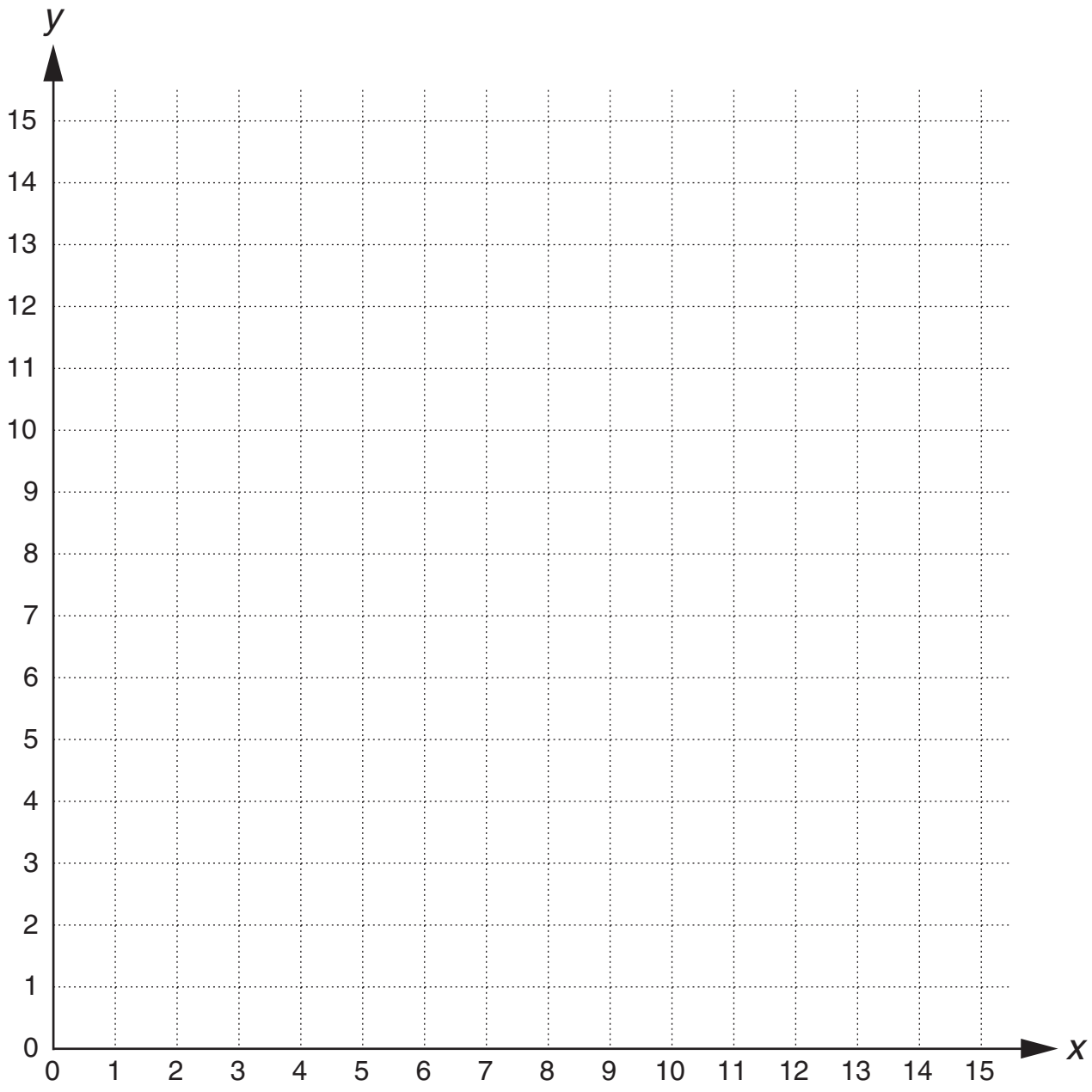
Name Date Time

Build-It Gameboard



Name Date Time

Coordinate Search Grid



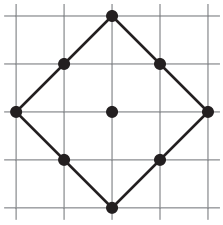
Name Date Time

Coordinate Search

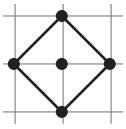
You are sailing a yacht in the Caribbean Sea. Unfortunately, you are caught in a tropical storm, and your navigation charts are damaged. You know that there are several physical landmarks to watch for. All the landmarks are located northeast of your current position in one quadrant of the damaged charts.

You will need to locate the following physical landmarks:

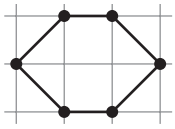
2 large islands



2 small islands



1 atoll



4 buoys

Use the tables from the navigation charts you salvaged. Graph the points of the missing physical landmarks onto the coordinate grid on *Math Masters,* page 448.

Here are some clues to help you:

The center of a large island is at (13,13). The center of another large island is at (2,6). The center of a small island is at (5,13). The center of the second small island is at (10,8).

Physical Landmarks

X-axis value	Number of points
0	1
1	2
2	3
3	3
4	3
5	3
6	1
7	0
8	0
9	2
10	5
11	4
12	4
13	4
14	2
15	1

Physical Landmarks

Y-axis value	Number of points
0	0
1	0
2	3
3	2
4	3
5	3
6	3
7	3
8	4
9	1
10	1
11	1
12	3
13	6
14	4
15	1

Name Date Time

Credits/Debits Game (Advanced Version) Record Sheets

Game 1

	Start	Change		End and Next Start
		Addition or Subtraction	Credit or Debit	
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Game 2

	Start	Change		End and Next Start
		Addition or Subtraction	Credit or Debit	
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Name Date Time

Exponent Ball Gameboard

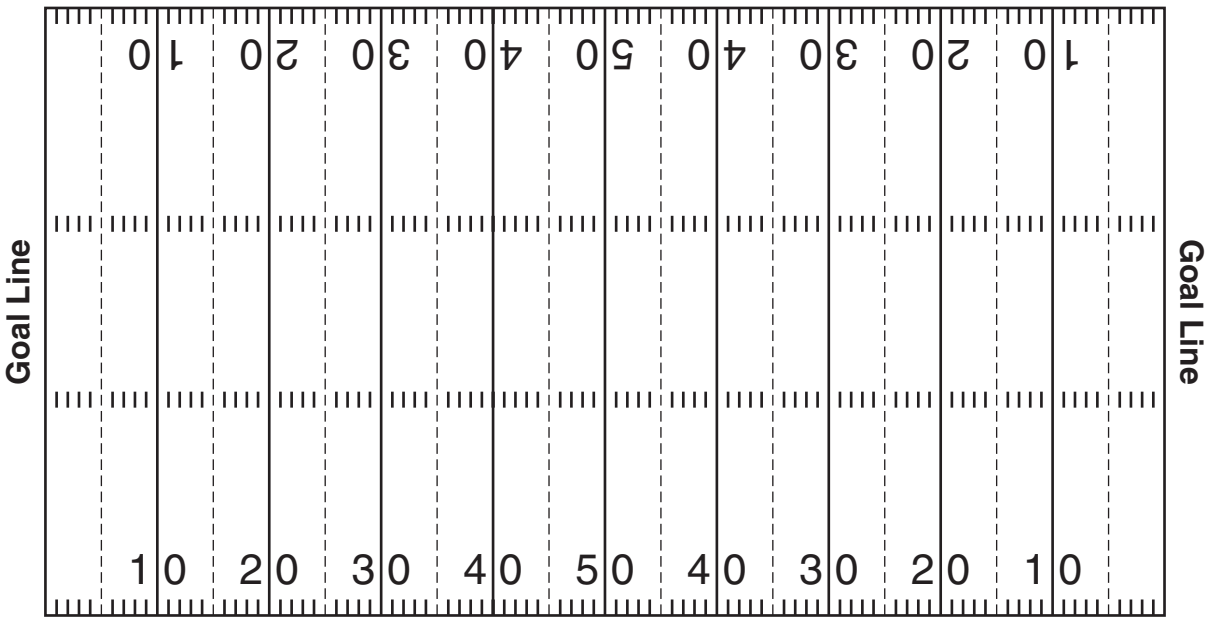


Table 1: Runs		
Value of Roll	**Move Ball**	**Chances of Gaining on the Ground**
1	−15 yd	−15 yards: 1 out of 6, or about 17%
2 to 6	+10 yd	10 yards or more: 5 out of 6, or about 83%
8 to 81	+20 yd	20 yards or more: 4 out of 6, or about 67%
in the 100s	+30 yd	30 yards or more: 13 out of 36, or about 36%
in the 1,000s	+40 yd	40 yards or more: 7 out of 36, or about 19%
in the 10,000s	+50 yd	50 yards: 1 out of 18, or about 6%

Table 2: Kicks		
Value of Roll	**Move Ball**	**Chances of Kicking**
1	+10 yd	10 yards or more: 6 out of 6, or 100%
2	+20 yd	20 yards or more: 5 out of 6, or about 83%
3	+30 yd	30 yards or more: 4 out of 6, or about 67%
4	+40 yd	40 yards or more: 3 out of 6, or about 50%
5	+50 yd	50 yards or more: 2 out of 6, or about 33%
6	+60 yd	60 yards: 1 out of 6, or about 17%

Name Date Time

Factor Bingo Game Mat

Fill in the squares on the game mat grid with any 25 numbers from 2–90. Write one number in each square on the grid. Every square must contain a different number. Be careful to mix the numbers so they are not in order on the grid.

	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90

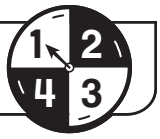
Name Date Time

Factor Captor Grid 1

1	2	2	2	2	2
2	3	3	3	3	3
3	4	4	4	4	5
5	5	5	6	6	7
7	8	8	9	9	10
10	11	12	13	14	15
16	18	20	21	22	24
25	26	27	28	30	32

Name Date Time

Factor Captor Grid 2



1	2	2	2	2	2	3
3	3	3	3	4	4	4
4	5	5	5	5	6	6
6	7	7	8	8	9	9
10	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	30
32	33	34	35	36	38	39
40	42	44	45	46	48	49
50	51	52	54	55	56	60

Name Date Time

Factor Captor 1–110 Grid

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110

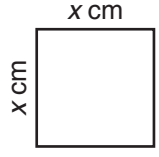
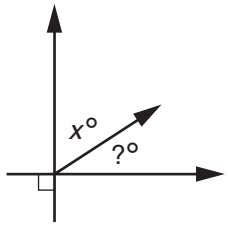
Name Date Time

First to 100 Problem Cards

How many inches are there in x feet? How many centimeters are there in x meters? 1	How many quarts are there in x gallons? 2	What is the smallest number of x's you can add to get a sum greater than 100? 3	Is $50 * x$ greater than 1,000? Is $\frac{x}{10}$ less than 1? 4
$\frac{1}{2}$ of $x = ?$ $\frac{1}{10}$ of $x = ?$ 5	$1 - x = ?$ $x + 998 = ?$ 6	If x people share 1,000 stamps equally, how many stamps will each person get? 7	What time will it be x minutes from now? What time was it x minutes ago? 8
It is 102 miles to your destination. You have gone x miles. How many miles are left? 9	What whole or mixed number equals x divided by 2? 10	Is x a prime or a composite number? Is x divisible by 2? 11	The time is 11:05 A.M. The train left x minutes ago. What time did the train leave? 12
Bill was born in 1939. Freddy was born the same day, but x years later. In what year was Freddy born? 13	Which is larger: $2 * x$ or $x + 50$? 14	There are x rows of seats. There are 9 seats in each row. How many seats are there in all? 15	Sargon spent x cents on apples. If she paid with a \$5 bill, how much change should she get? 16

Name Date Time

First to 100 Problem Cards *continued*

The temperature was 25°F. It dropped x degrees. What was the new temperature? 17	Each story in a building is 10 ft high. If the building has x stories, how tall is it? 18	Which is larger: $2 * x$ or $\frac{100}{x}$? 19	$20 * x = ?$ 20
Name all the whole-number factors of x. 21	Is x an even or an odd number? Is x divisible by 9? 22	Shalanda was born on a Tuesday. Linda was born x days later. On what day of the week was Linda born? 23	Will had a quarter plus x cents. How much money did he have in all? 24
Find the perimeter and area of this square.  25	What is the median of these weights? 5 pounds 21 pounds x pounds What is the range? 26	 27	$x^2 = ?$ 50% of $x^2 = ?$ 28
$(3x + 4) - 8 = ?$ 29	x out of 100 students voted for Ruby. Is this more than 25%, less than 25%, or exactly 25% of the students? 30	There are 200 students at Wilson School. x% speak Spanish. How many students speak Spanish? 31	People answered a survey question either Yes or No. x% answered Yes. What percent answered No? 32

Name Date Time

First to 100 Record Sheet

Example: $x = 30$

Card Number	Number Model/ Response	Score
20	20 * 30 = 600	30

$x =$ _____

Card Number	Number Model/ Response	Score

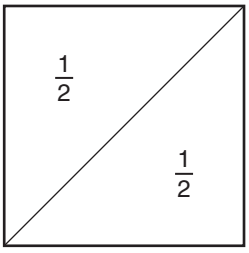
Name Date Time

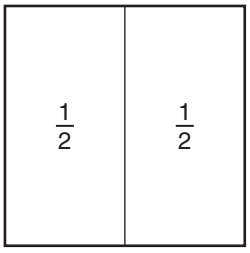
Fraction Action, Fraction Friction Cards

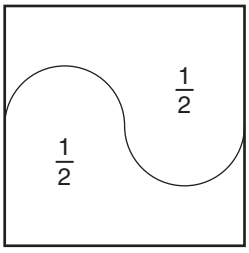
$\frac{1}{2}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{4}$
$\frac{3}{4}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{5}{6}$
$\frac{1}{12}$	$\frac{1}{12}$	$\frac{5}{12}$	$\frac{5}{12}$
$\frac{7}{12}$	$\frac{7}{12}$	$\frac{11}{12}$	$\frac{11}{12}$

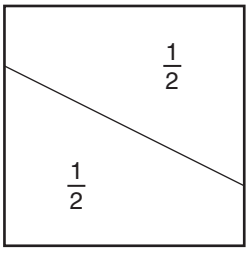
Name Date Time

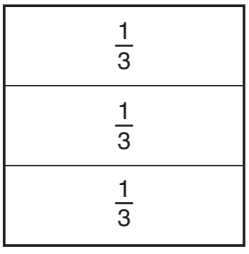
Fraction Capture Gameboard

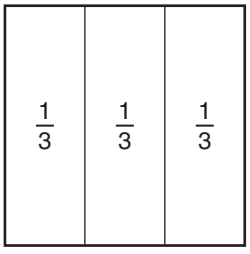


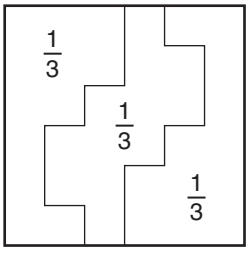


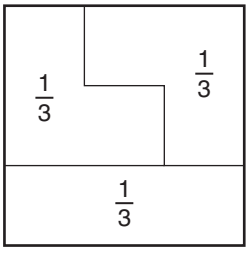


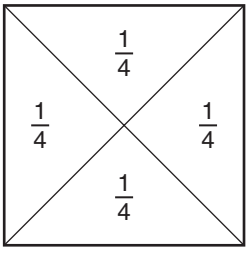


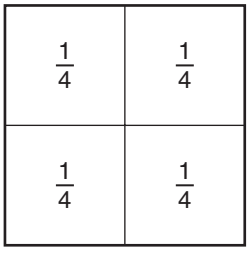


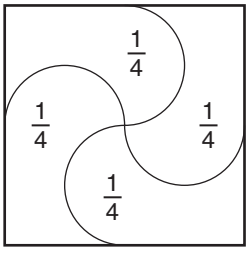


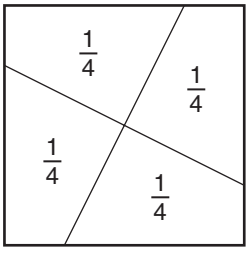


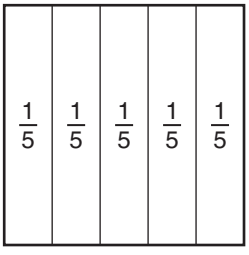


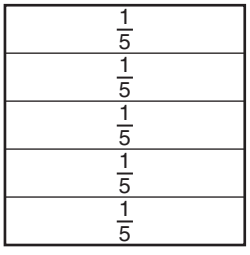


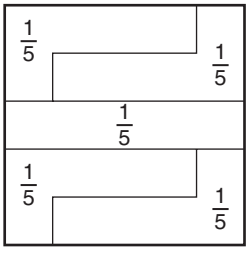


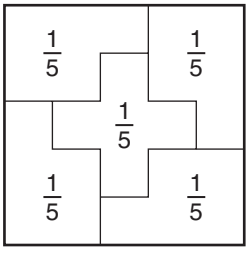


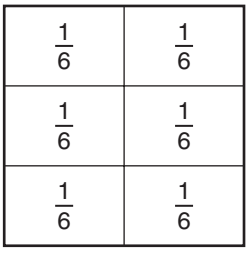


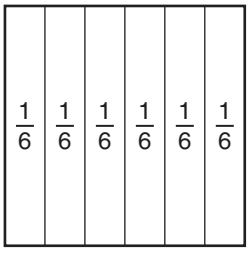


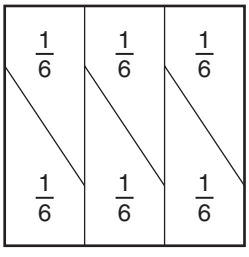


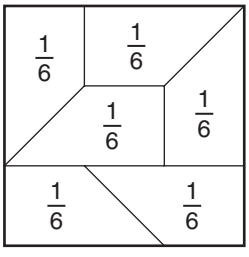












Name Date Time

Fraction Capture Record Sheet

Player 1

Round	Dice Roll	Fraction	Fraction Addition Expression
1			
2			
3			
4			
5			

Name Date Time

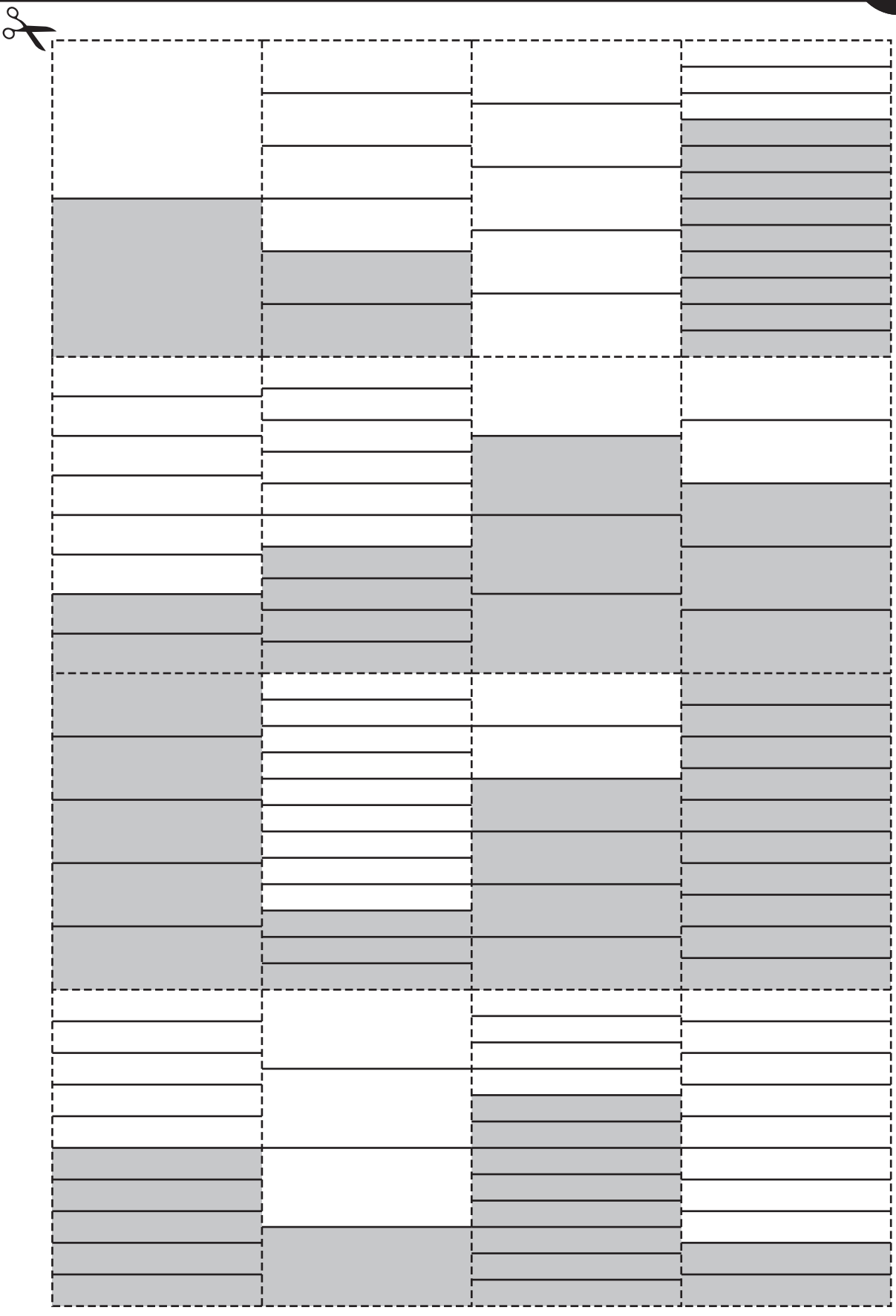
Fraction Capture Record Sheet

Player 2

Round	Dice Roll	Fraction	Fraction Addition Expression
1			
2			
3			
4			
5			

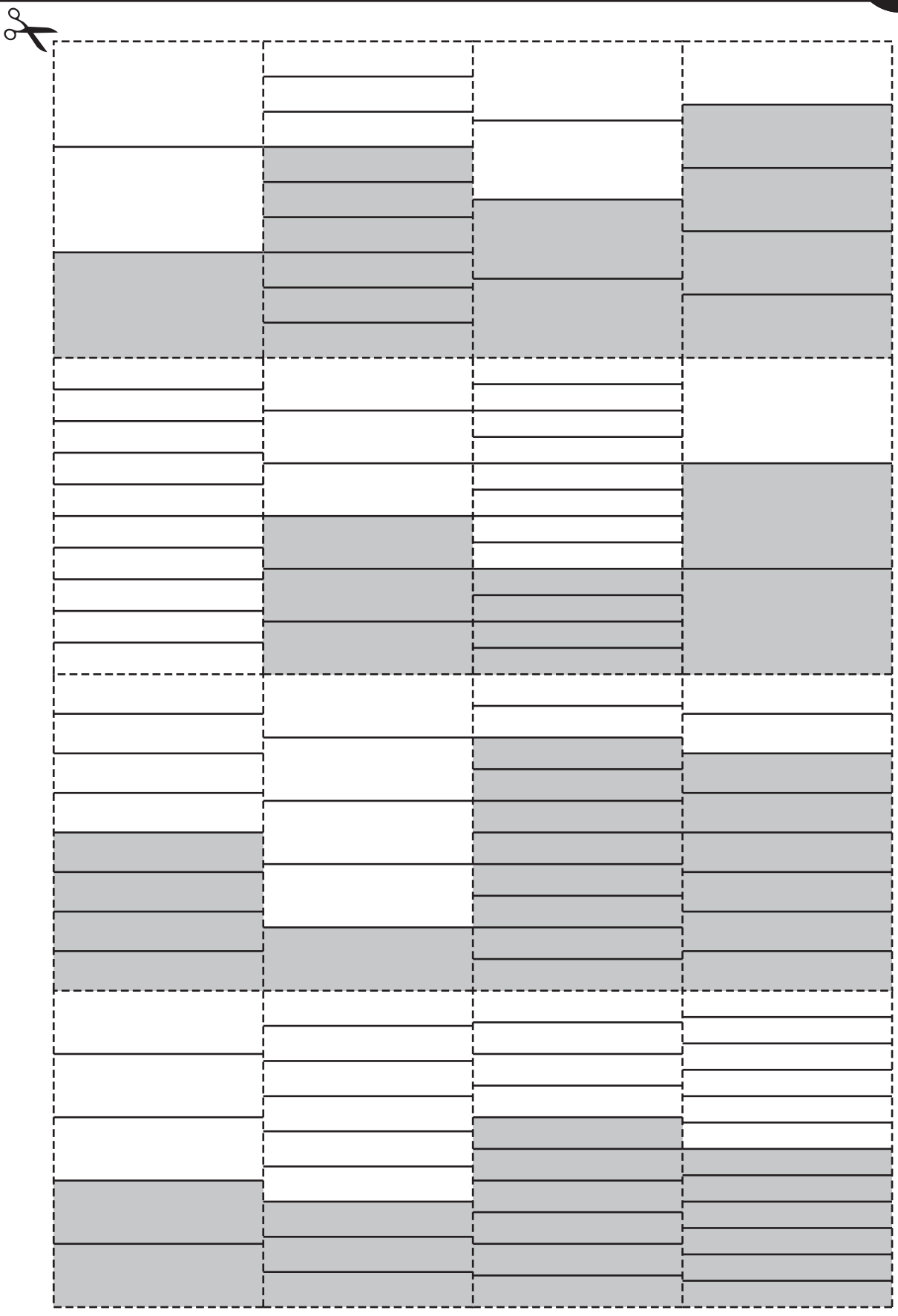
Name Date Time

Fraction Top-It Cards 1



Name Date Time

Fraction Top-It Cards 2



Name Date Time

Fraction Of Fraction Cards 1

$\frac{0}{2}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{3}$
$\frac{1}{4}$	$\frac{1}{4}$	$\frac{2}{4}$	$\frac{1}{5}$
$\frac{1}{5}$	$\frac{1}{10}$	$\frac{5}{10}$	$\frac{10}{10}$
$\frac{2}{2}$	$\frac{0}{3}$	$\frac{2}{3}$	$\frac{3}{3}$

Name Date Time

Fraction Of Fraction Cards 2

$\frac{0}{4}$	$\frac{3}{4}$	$\frac{4}{4}$	$\frac{0}{5}$
$\frac{2}{5}$	$\frac{3}{5}$	$\frac{4}{5}$	$\frac{5}{5}$
$\frac{1}{10}$	$\frac{2}{10}$	$\frac{3}{10}$	$\frac{4}{10}$
$\frac{6}{10}$	$\frac{7}{10}$	$\frac{8}{10}$	$\frac{9}{10}$

Name Date Time

Fraction Of Gameboard and Record Sheet

Fraction card	of	WHOLE (Choose 1 of these sets.)
		Set card

Round	"Fraction-of" Problem	Points
Sample	$\frac{1}{5}$ of 25	5
1		
2		
3		
4		
5		
6		
7		
8		
	Total Score	

Name Date Time

Fraction/Percent Concentration Tiles (Front)

10%	20%	25%	30%
40%	50%	60%	70%
75%	80%	90%	100%
$\frac{1}{2}$	$\frac{1}{4}$	$\frac{3}{4}$	$\frac{1}{5}$
$\frac{2}{5}$	$\frac{3}{5}$	$\frac{4}{5}$	$\frac{1}{10}$
$\frac{3}{10}$	$\frac{7}{10}$	$\frac{9}{10}$	$\frac{2}{2}$

Name Date Time

Fraction/Percent Concentration Tiles (Back)

%	%	%	%
%	%	%	%
%	%	%	%
$\frac{a}{b}$	$\frac{a}{b}$	$\frac{a}{b}$	$\frac{a}{b}$
$\frac{a}{b}$	$\frac{a}{b}$	$\frac{a}{b}$	$\frac{a}{b}$
$\frac{a}{b}$	$\frac{a}{b}$	$\frac{a}{b}$	$\frac{a}{b}$

Name Date Time

Fraction Of Set Cards

3 counters 20 counters 15 counters	4 counters 21 counters 30 counters	5 counters 12 counters 20 counters	6 counters 28 counters 40 counters
8 counters 27 counters 20 counters	10 counters 32 counters 24 counters	12 counters 30 counters 25 counters	15 counters 36 counters 20 counters
18 counters 36 counters 10 counters	20 counters 4 counters 3 counters	21 counters 30 counters 24 counters	25 counters 6 counters 40 counters
28 counters 35 counters 30 counters	30 counters 32 counters 15 counters	36 counters 20 counters 24 counters	40 counters 18 counters 25 counters

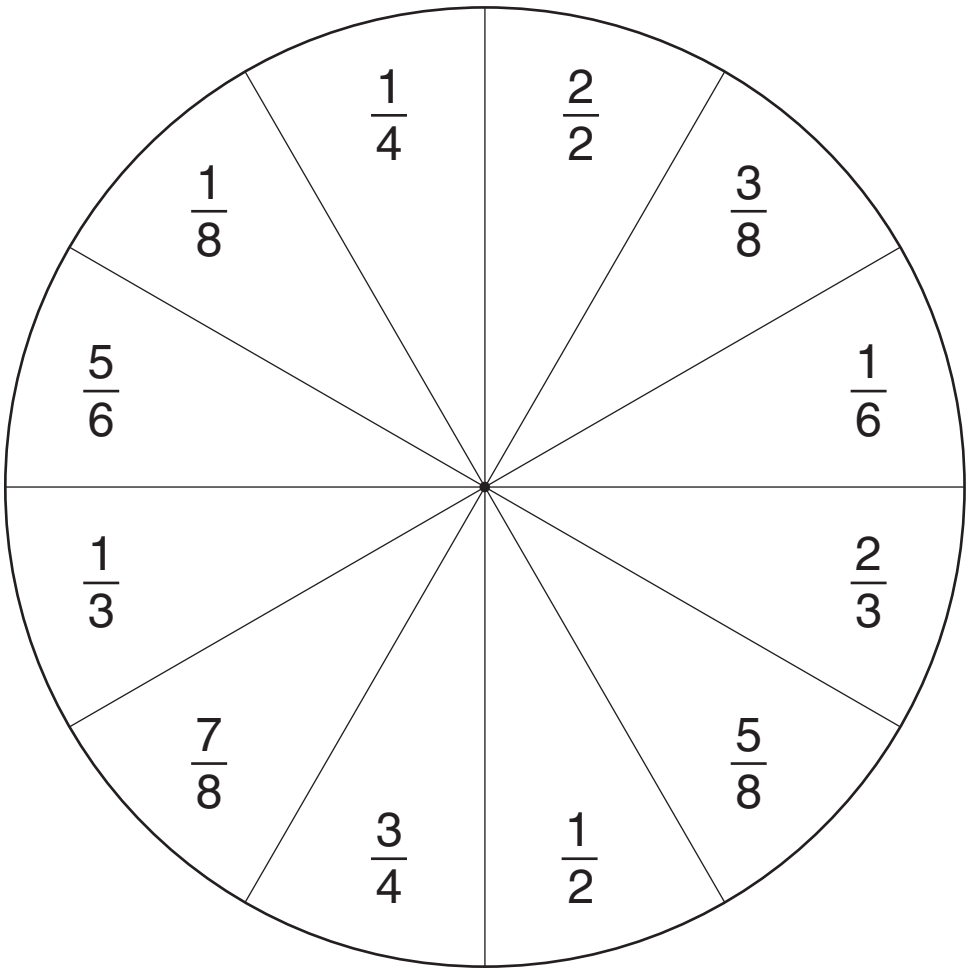
Name Date Time

Fraction Spin Record Sheet

Name	Name
_____ + _____ < 1	_____ + _____ < 1
_____ + _____ > 1	_____ + _____ > 1
_____ − _____ < $\frac{1}{2}$	_____ − _____ < $\frac{1}{2}$
_____ − _____ > $\frac{1}{2}$	_____ − _____ > $\frac{1}{2}$
_____ + _____ < 1	_____ + _____ < 1
_____ + _____ < $\frac{1}{4}$	_____ + _____ < $\frac{1}{4}$
_____ + _____ > $\frac{1}{4}$	_____ + _____ > $\frac{1}{4}$
_____ + _____ = 1	_____ + _____ = 1
_____ − _____ < $\frac{1}{4}$	_____ − _____ < $\frac{1}{4}$
_____ − _____ > $\frac{1}{4}$	_____ − _____ > $\frac{1}{4}$
_____ + _____ < $\frac{3}{4}$	_____ + _____ < $\frac{3}{4}$
_____ + _____ > $\frac{3}{4}$	_____ + _____ > $\frac{3}{4}$

Name Date Time

Fraction Spin



Name Date Time

Frac-Tac-Toe Number-Card Board

NUMERATOR PILE

PLACE CARDS FACEDOWN.

WHEN ALL CARDS ARE USED, SHUFFLE AND REPLACE.

NUMERATOR PILE

PLAY EACH CARD FACEUP.

DENOMINATOR PILE

PLACE CARDS FACEDOWN.

WHEN ALL CARDS ARE USED, JUST REPLACE. DO NOT SHUFFLE!

DENOMINATOR PILE

PLAY EACH CARD FACEUP.

Name Date Time

2-4-5-10 Frac-Tac-Toe (Decimal Bingo Version)

If you use a standard deck of playing cards:

- Use Queens as zeros (0).
- Use Aces as ones (1).
- Discard Jacks, Kings, and Jokers.

If you use an Everything Math Deck, discard cards greater than 10.

Fill in the gameboard by entering these numbers in the empty spaces:

0	0	0.1	0.2	0.25	0.3	0.4	0.5
0.5	0.6	0.7	0.75	0.8	0.9	1	1

Numerator Pile

All remaining cards

Denominator Pile

Two each of 2, 4, 5, and 10 cards

> 1.0		> 2.0		> 1.0
> 1.5		> 1.5		> 1.5
> 1.0		> 2.0		> 1.0

Name Date Time

2-4-5-10 Frac-Tac-Toe (Decimal Version)

If you use a standard deck of playing cards,

- use queens as zeros (0);
- use aces as ones (1);
- discard jacks, kings, and jokers.

If you use an Everything Math Deck, discard cards greater than 10.

Use different color counters or coins as markers. If you use coins, one player is “heads” and the other player is “tails.”

If you use a pencil to initial the squares, print lightly so you can erase and use the board again.

Numerator Pile

All remaining cards

Denominator Pile

Two each of 2, 4, 5, and 10 cards

>1.0	0 or 1	>2.0	0 or 1	>1.0
0.1	0.2	0.25	0.3	0.4
>1.5	0.5	>1.5	0.5	>1.5
0.6	0.7	0.75	0.8	0.9
>1.0	0 or 1	>2.0	0 or 1	>1.0

Name Date Time

2-4-5-10 Frac-Tac-Toe (Percent Bingo Version)

If you use a standard deck of playing cards:

- Use Queens as zeros (0).
- Use Aces as ones (1).
- Discard Jacks, Kings, and Jokers.

If you use an Everything Math Deck, discard cards greater than 10.

Fill in the gameboard by entering these numbers in the empty spaces:

0% 0% 10% 20% 25% 30% 40% 50%

50% 60% 70% 75% 80% 90% 100% 100%

Numerator Pile

All remaining cards

Denominator Pile

Two each of 2, 4, 5, and 10 cards

>100%		>200%		>100%
>100%		>200%		>100%
>100%		>300%		>100%

Name Date Time

2-4-5-10 Frac-Tac-Toe (Percent Version)

If you use a standard deck of playing cards,

- use queens as zeros (0);
- use aces as ones (1);
- discard jacks, kings, and jokers.

If you use an Everything Math Deck, discard cards greater than 10.

Use different color counters or coins as markers. If you use coins, one player is “heads” and the other player is “tails.”

If you use a pencil to initial the squares, print lightly so you can erase and use the board again.

Numerator Pile

All remaining cards

Denominator Pile

Two each of 2, 4, 5, and 10 cards

>100%	0% or 100%	>200%	0% or 100%	>100%
10%	20%	25%	30%	40%
>100%	50%	>200%	50%	>100%
60%	70%	75%	80%	90%
>100%	0% or 100%	>200%	0% or 100%	>100%

Name Date Time

2-4-8 Frac-Tac-Toe (Decimal Bingo Version)

If you use a standard deck of playing cards:

- Use Queens as zeros (0).
- Use Aces as ones (1).
- Discard Jacks, Kings, and Jokers.

If you use an Everything Math Deck, discard cards greater than 10.

Numerator Pile

All remaining cards

Denominator Pile

Two each of 2, 4, and 8 cards

Fill in the gameboard by entering these numbers in the empty spaces:

0	0	0.125	0.25	0.375	0.5	0.5	0.625
0.75	0.875	1	1	1.5	1.5	2	2

> 2.0		> 1.5		> 2.0
> 1.0		0.25 or 0.75		> 1.0
> 2.0		1.125		> 2.0

Name Date Time

2-4-8 Frac-Tac-Toe (Decimal Version)

If you use a standard deck of playing cards,

- use queens as zeros (0);
- use aces as ones (1);
- discard jacks, kings, and jokers.

If you use an Everything Math Deck, discard cards greater than 10.

Use different color counters or coins as markers. If you use coins, one player is “heads” and the other player is “tails.”

If you use a pencil to initial the squares, print lightly so you can erase and use the board again.

Numerator Pile

All remaining cards

Denominator Pile

Two each of 2, 4, and 8 cards

>2.0	0 or 1	>1.5	0 or 1	>2.0
1.5	0.125	0.25	0.375	1.5
>1.0	0.5	0.25 or 0.75	0.5	>1.0
2.0	0.625	0.75	0.875	2.0
>2.0	0 or 1	1.125	0 or 1	>2.0

Name Date Time

2-4-8 Frac-Tac-Toe (Percent Bingo Version)

If you use a standard deck of playing cards:

- Use Queens as zeros (0).
- Use Aces as ones (1).
- Discard Jacks, Kings, and Jokers.

If you use an Everything Math Deck, discard cards greater than 10.

Fill in the gameboard by entering these numbers in the empty spaces:

0%	0%	$12\frac{1}{2}\%$	25%	$37\frac{1}{2}\%$	50%	50%	$62\frac{1}{2}\%$
75%	$87\frac{1}{2}\%$	100%	100%	150%	150%	200%	200%

Numerator Pile

All remaining cards

Denominator Pile

Two each of 2, 4, and 8 cards

>200%		>150%		>200%
>100%		25% or 75%		>100%
>200%		$112\frac{1}{2}\%$		>200%

Name Date Time

2-4-8 Frac-Tac-Toe (Percent Version)

If you use a standard deck of playing cards:

- Use Queens as zeros (0).
- Use Aces as ones (1).
- Discard Jacks, Kings, and Jokers.

If you use an Everything Math Deck, discard cards greater than 10.

Use different color counters or coins as markers. If you use coins, one player is HEADS and the other player is TAILS.

If you use a pencil to initial the squares, print lightly so you can erase and use the board again.

Numerator Pile

All remaining cards

Denominator Pile

Two each of 2, 4, and 8 cards

$>200\%$	0% or 100%	$>150\%$	0% or 100%	$>200\%$
150%	$12\frac{1}{2}\%$	25%	$37\frac{1}{2}\%$	150%
$>100\%$	50%	25% or 75%	50%	$>100\%$
200%	$62\frac{1}{2}\%$	75%	$87\frac{1}{2}\%$	200%
$>200\%$	0% or 100%	$112\frac{1}{2}\%$	0% or 100%	$>200\%$

Name Date Time

3-6-9 Frac-Tac-Toe (Decimal Bingo Version)

If you use a standard deck of playing cards:

- Use Queens as zeros (0).
- Use Aces as ones (1).
- Discard Jacks, Kings, and Jokers.

If you use an Everything Math Deck, discard cards greater than 10.

Fill in the gameboard by entering these numbers in the empty spaces:

0	0	$0.1\overline{6}$	$0.\overline{3}$	$0.\overline{3}$	$0.\overline{6}$
$0.\overline{6}$	$0.8\overline{3}$	1	1	$1.\overline{3}$	$1.\overline{6}$

Numerator Pile

All remaining cards

Denominator Pile

Two each of 3, 6, and 9 cards

> 1.0		$0.\overline{1}$		> 1.0
	$0.\overline{2}$			$0.\overline{4}$
> 2.0	$0.\overline{5}$	> 1.0		> 2.0
	$0.\overline{7}$		$0.\overline{8}$	
> 1.0				> 1.0

Name Date Time

3-6-9 Frac-Tac-Toe (Decimal Version)

If you use a standard deck of playing cards,

- use queens as zeros (0);
- use aces as ones (1);
- discard jacks, kings, and jokers.

If you use an Everything Math Deck, discard cards greater than 10.

Use different color counters or coins as markers. If you use coins, one player is “heads” and the other player is “tails.”

If you use a pencil to initial the squares, print lightly so you can erase and use the board again.

Numerator Pile

All remaining cards

Denominator Pile

Two each of 3, 6, and 9 cards

>1.0	0 or 1	$0.\overline{1}$	0 or 1	>1.0
$0.1\overline{6}$	$0.\overline{2}$	$0.\overline{3}$	$0.\overline{3}$	$0.\overline{4}$
>2.0	$0.\overline{5}$	>1.0	$0.\overline{6}$	>2.0
$0.\overline{6}$	$0.\overline{7}$	$0.8\overline{3}$	$0.\overline{8}$	$1.\overline{3}$
>1.0	0 or 1	$1.\overline{6}$	0 or 1	>1.0

Name Date Time

3-6-9 Frac-Tac-Toe (Percent Bingo Version)

If you use a standard deck of playing cards:

- Use Queens as zeros (0).
- Use Aces as ones (1).
- Discard Jacks, Kings, and Jokers.

If you use an Everything Math Deck, discard cards greater than 10.

Fill in the gameboard by entering these numbers in the empty spaces:

0% 0% 100% $16\frac{2}{3}\%$ $33\frac{1}{3}\%$ $33\frac{1}{3}\%$

$66\frac{2}{3}\%$ $83\frac{1}{3}\%$ 100% $133\frac{1}{3}\%$ $166\frac{2}{3}\%$ $166\frac{2}{3}\%$

Numerator Pile

All remaining cards

Denominator Pile

Two each of 3, 6, and 9 cards

>100%		11.1%		>100%
	22.2%			44.4%
>200%	55.5%	>100%		>200%
	77.7%		88.8%	
>100%				>100%

Name Date Time

3-6-9 Frac-Tac-Toe (Percent Version)

If you use a standard deck of playing cards:

- Use Queens as zeros (0).
- Use Aces as ones (1).
- Discard Jacks, Kings, and Jokers.

If you use an Everything Math Deck, discard cards greater than 10.

Use different color counters or coins as markers. If you use coins, one player is HEADS and the other player is TAILS.

If you use a pencil to initial the squares, print lightly so you can erase and use the board again.

Numerator Pile

All remaining cards

Denominator Pile

Two each of 3, 6, and 9 cards

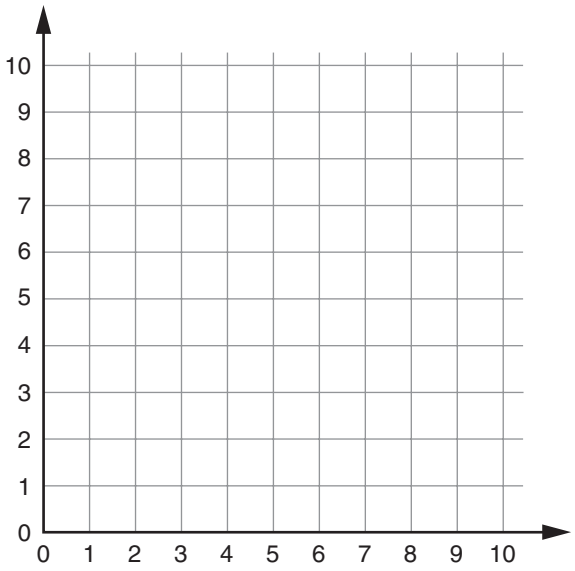
$>100\%$	0% or 100%	11.1%	0% or 100%	$>100\%$
$16\frac{2}{3}\%$	22.2%	$33\frac{1}{3}\%$	33.3%	44.4%
$>200\%$	55.5%	$>100\%$	66.6%	$>200\%$
$66\frac{2}{3}\%$	77.7%	$83\frac{1}{3}\%$	88.8%	$133\frac{1}{3}\%$
$>100\%$	0% or 100%	$166\frac{2}{3}\%$	0% or 100%	$>100\%$

Name Date Time

Hidden Treasure Gameboards 1

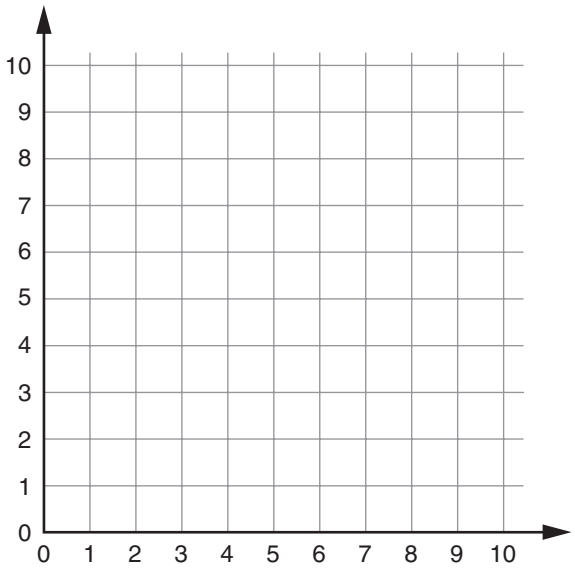
Each player uses Grids 1 and 2.

Grid 1: Hide your point here.



Grid 1

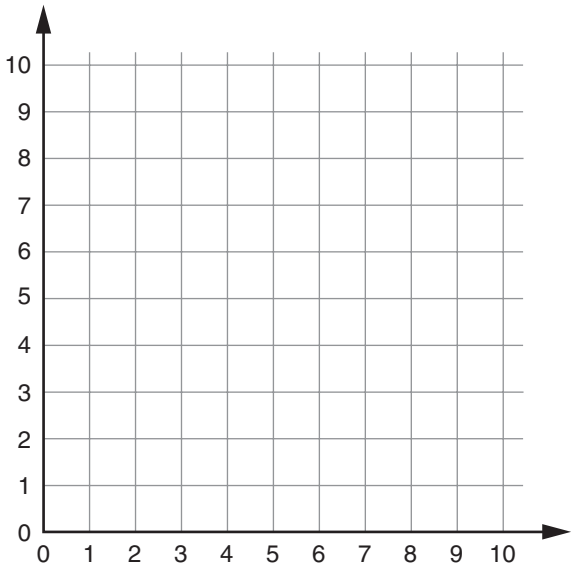
Grid 2: Guess other player's point here.



Grid 2

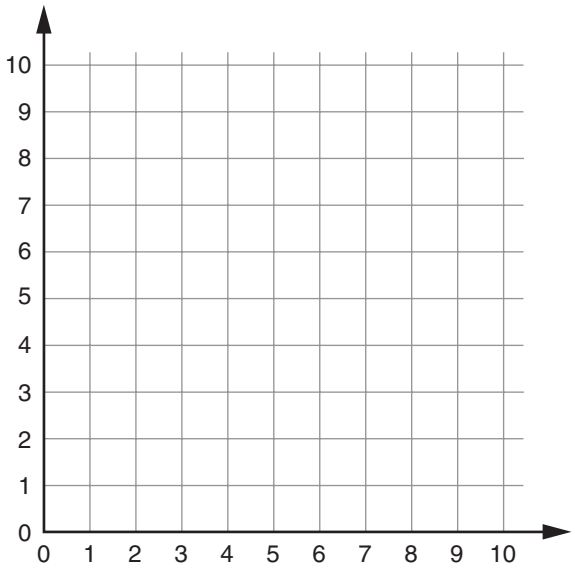
Use this set of grids to play another game.

Grid 1: Hide your point here.



Grid 1

Grid 2: Guess other player's point here.



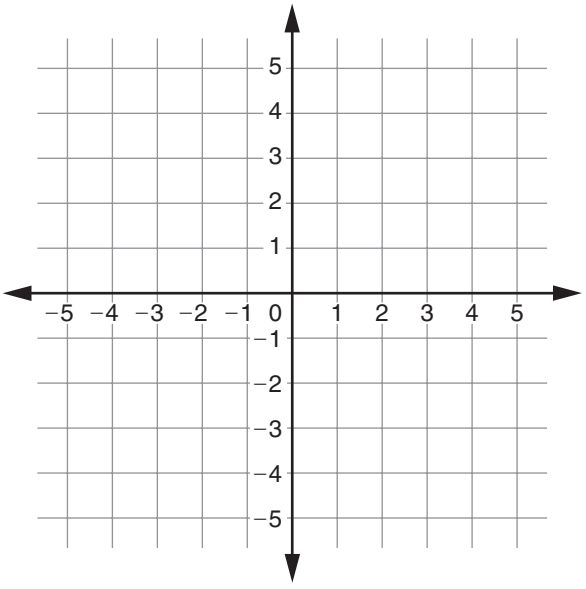
Grid 2

Name Date Time

Hidden Treasure Gameboards 2

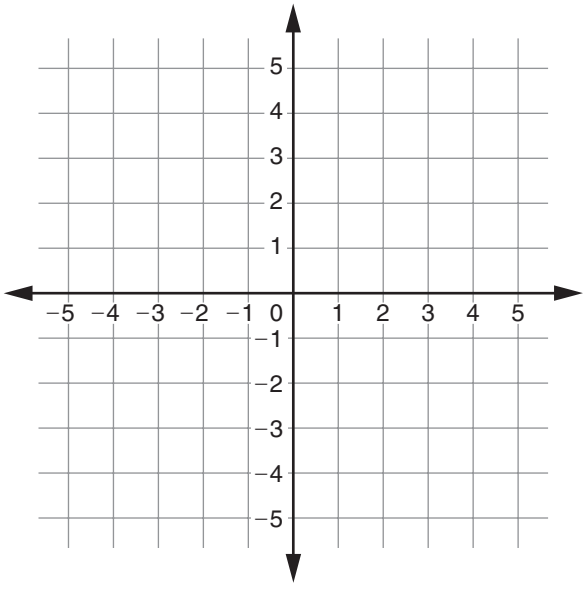
Each player uses Grids 1 and 2.

Grid 1: Hide your point here.



Grid 1

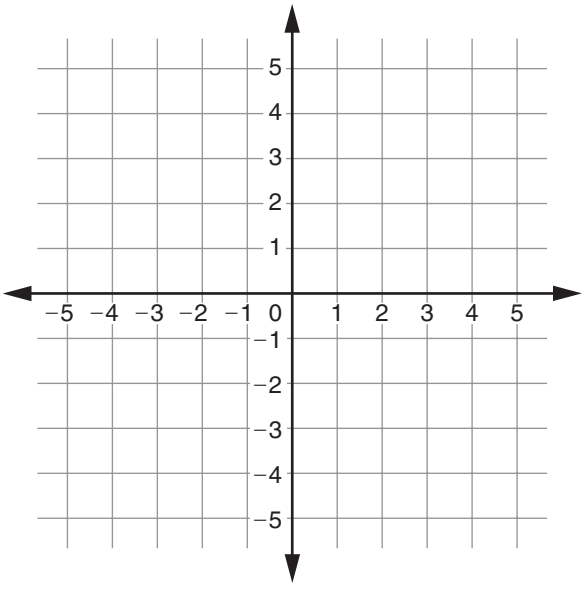
Grid 2: Guess other player's point here.



Grid 2

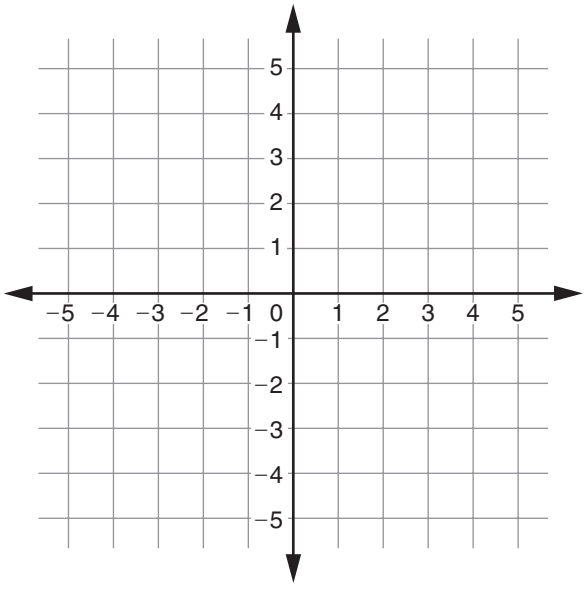
Use this set of grids to play another game.

Grid 1: Hide your point here.



Grid 1

Grid 2: Guess other player's point here.



Grid 2

Name Date Time

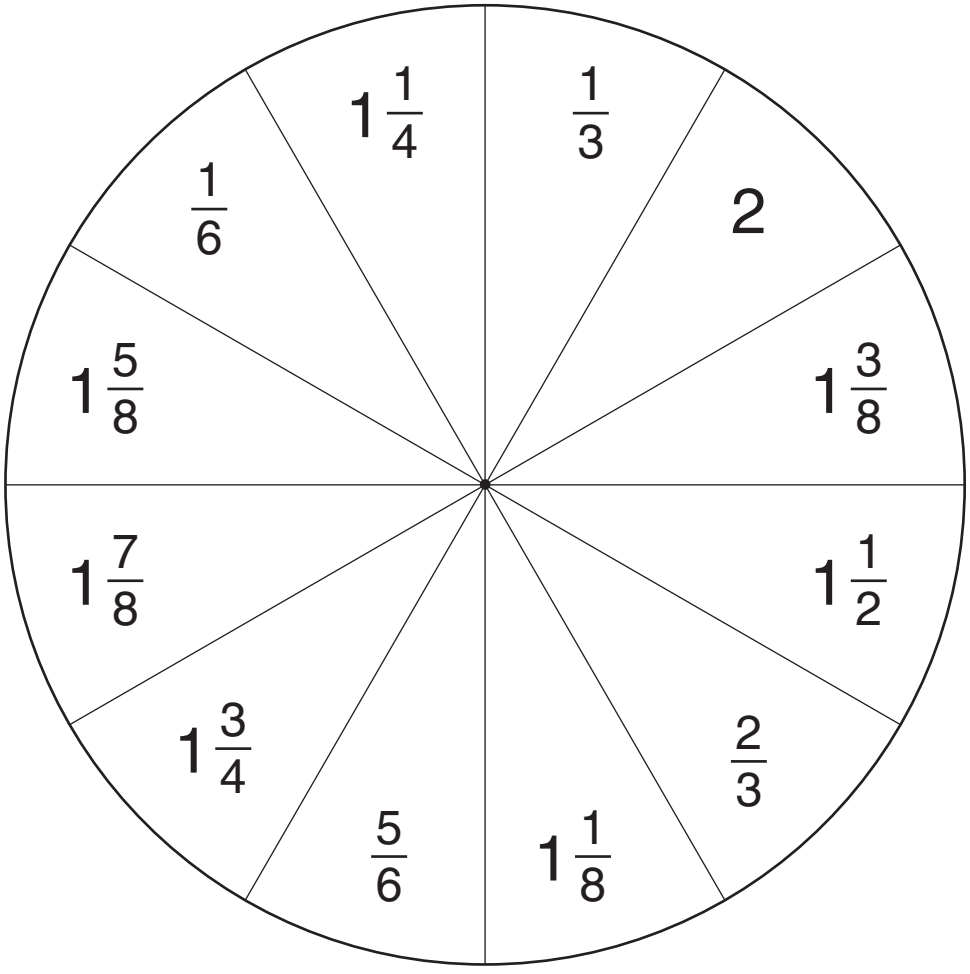
High-Number Toss Record Sheet

Hundred Millions	Ten Millions	Millions	,	Hundred Thousands	Ten Thousands	Thousands	,	Hundreds	Tens	Ones

Round	Player 1	>, <, =	Player 2
Sample	1 3 2 , 6 132,000,000	>	3 5 6 , 4 3,560,000
1	___ ___ ___ , ___ _____		___ ___ ___ , ___ _____
2	___ ___ ___ , ___ _____		___ ___ ___ , ___ _____
3	___ ___ ___ , ___ _____		___ ___ ___ , ___ _____
4	___ ___ ___ , ___ _____		___ ___ ___ , ___ _____
5	___ ___ ___ , ___ _____		___ ___ ___ , ___ _____

Name Date Time

Mixed-Number Spin



Name Date Time

Mixed-Number Spin Record Sheet

Name	Name
_____ + _____ < 3	_____ + _____ < 3
_____ + _____ > 3	_____ + _____ > 3
_____ − _____ < 1	_____ − _____ < 1
_____ − _____ < $\frac{1}{2}$	_____ − _____ < $\frac{1}{2}$
_____ + _____ > 1	_____ + _____ > 1
_____ + _____ < 1	_____ + _____ < 1
_____ + _____ < 2	_____ + _____ < 2
_____ − _____ = 3	_____ − _____ = 3
_____ − _____ > 1	_____ − _____ > 1
_____ + _____ > $\frac{1}{2}$	_____ + _____ > $\frac{1}{2}$
_____ + _____ < 3	_____ + _____ < 3
_____ + _____ > 2	_____ + _____ > 2

Name Date Time

Name That Number Record Sheet

Round 1

Target number: _____ My cards: _____ _____ _____ _____ _____ _____

My best solution (number model): _____

Number of cards used: _____

Round 2

Target number: _____ My cards: _____ _____ _____ _____ _____ _____

My best solution (number model): _____

Number of cards used: _____

Name Date Time

Name That Number Record Sheet

Round 1

Target number: _____ My cards: _____ _____ _____ _____ _____ _____

My best solution (number model): _____

Number of cards used: _____

Round 2

Target number: _____ My cards: _____ _____ _____ _____ _____ _____

My best solution (number model): _____

Number of cards used: _____

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Name Date Time

Number Top-It Mat

Millions

Hundred-Thousands

Ten-Thousands

Thous

Name Date Time

Number Top-It Mat *continued*

Ones

Tens

Hundreds

Thousands

Do not cut. Paste or tape to *Math Masters*, page 491

Name Date Time

Top-It Record Sheet

Play a round of *Top-It.* Record your number sentence and your opponent's number sentence. Write >, <, or = to compare the number sentences.

Round	Player 1	>, <, =	Player 2
Sample	$4 + 6 = 10$	<	$8 + 3 = 11$
1			
2			
3			
4			
5			

Name Date Time

Top-It Record Sheet

Play a round of *Top-It.* Record your number sentence and your opponent's number sentence. Write >, <, or = to compare the number sentences.

Round	Player 1	>, <, =	Player 2
Sample	$4 + 6 = 10$	<	$8 + 3 = 11$
1			
2			
3			
4			
5			

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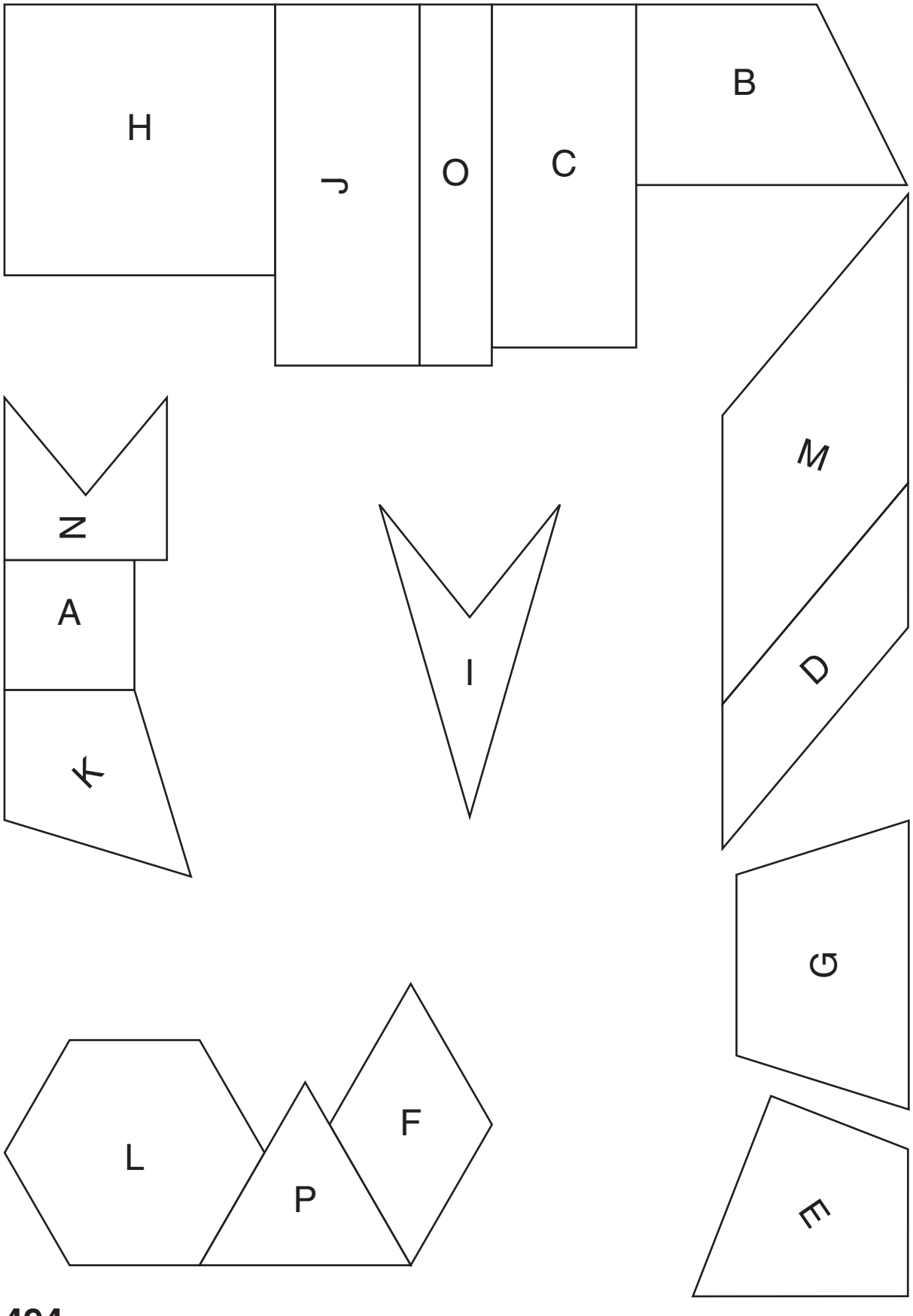
Name Date Time

Polygon Capture Pieces



Name Date Time

Polygon Capture Property Cards

There is only one right angle.	There are one or more right angles.	All angles are right angles.	There are no right angles.
There is at least one acute angle.	At least one angle is more than 90°.	All angles are right angles.	There are no right angles.
All opposite sides are parallel.	Only one pair of sides is parallel.	There are no parallel sides.	All sides are the same length.
All opposite sides are parallel.	Some sides have the same length.	All opposite sides have the same length.	**Wild Card:** Pick your own side property.

Name Date Time

Polygon Capture Property Cards

Angles	Angles	Angles	Angles
Angles	Angles	Angles	Angles
Sides	Sides	Sides	Sides
Sides	Sides	Sides	Sides

Name Date Time

Polygon Capture Record Sheet

Round	Property	List Polygon Captured	Score
1			
2			
3			
4			
5			
		Total Score	

Name Date Time

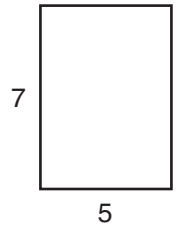
Rugs and Fences Area and Perimeter Deck

A Find the area of the polygon.	A Find the area of the polygon.	A Find the area of the polygon.	A Find the area of the polygon.
P Find the perimeter of the polygon.	P Find the perimeter of the polygon.	P Find the perimeter of the polygon.	P Find the perimeter of the polygon.
A or P Opponent's Choice	A or P Opponent's Choice	A or P Opponent's Choice	A or P Opponent's Choice
A or P Player's Choice	A or P Player's Choice	A or P Player's Choice	A or P Player's Choice

Name Date Time

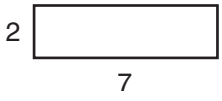
Rugs and Fences Polygon Deck B

1



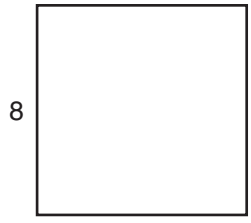
2

3



4

5



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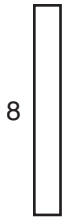

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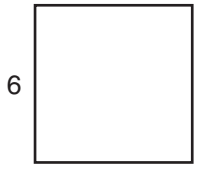

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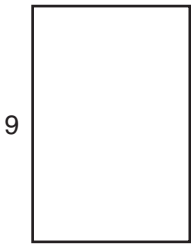

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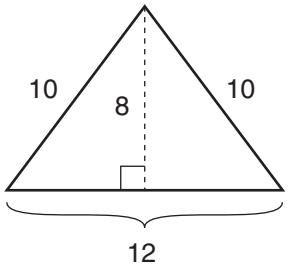

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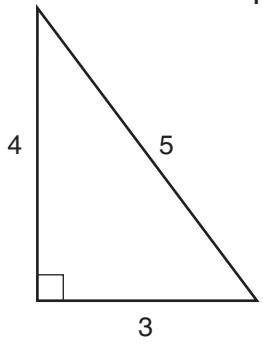

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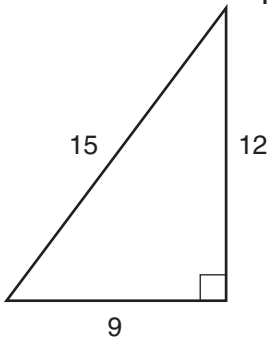

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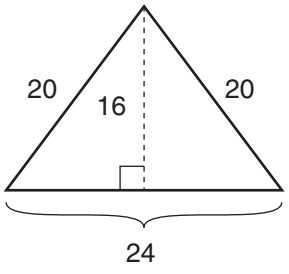

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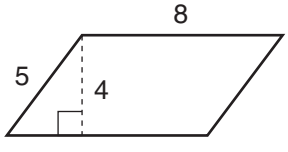

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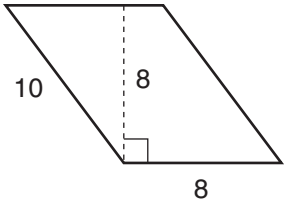

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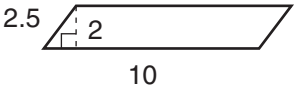

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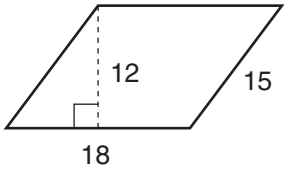
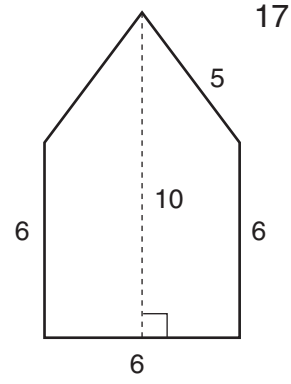


Name Date Time

Rugs and Fences Polygon Deck C

17



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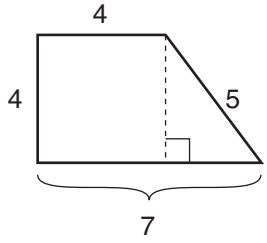

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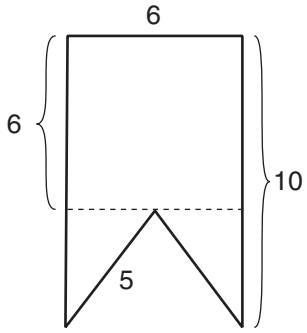

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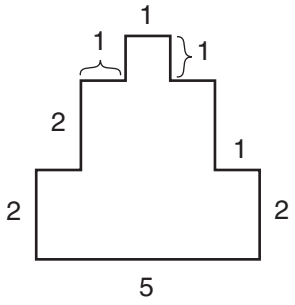

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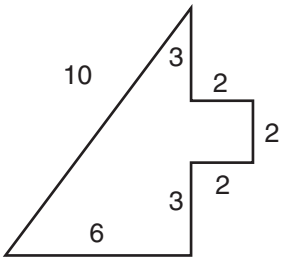

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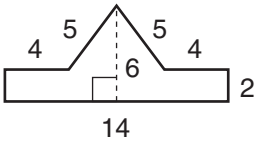

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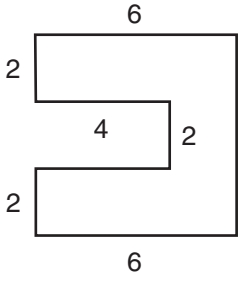

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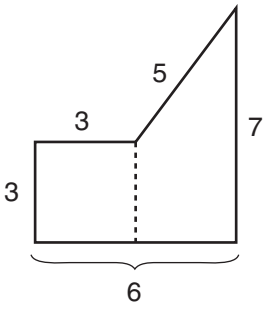

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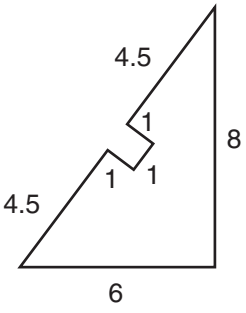

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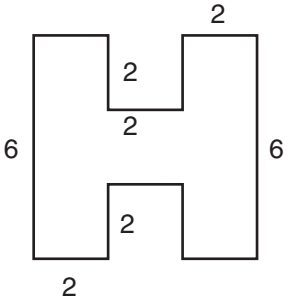

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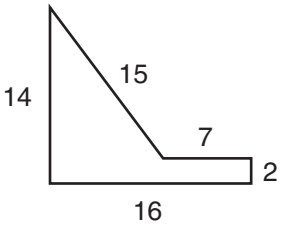

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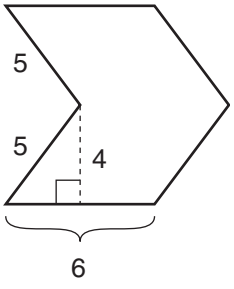

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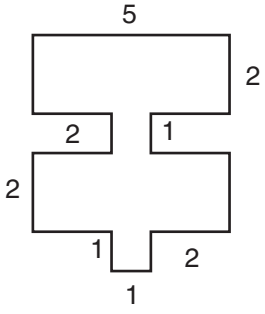

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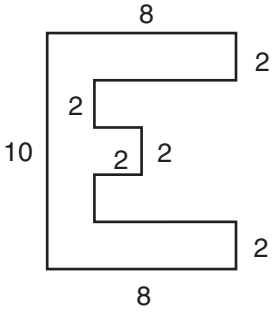

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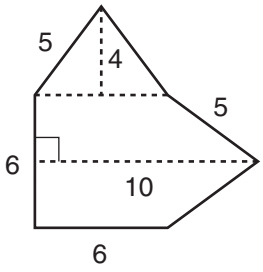

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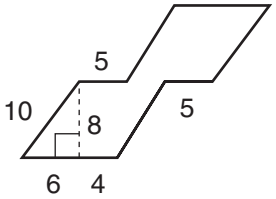

Name Date Time

Rugs and Fences Record Sheet

Round	Card number	Circle A (area) or P (perimeter)	Number model	Score
Sample	3	A or Ⓟ	10 + 10 + 2 + 2 = 24	24
1		A or P		
2		A or P		
3		A or P		
4		A or P		
5		A or P		
6		A or P		
7		A or P		
8		A or P		
			Total Score	

Round	Card number	Circle A (area) or P (perimeter)	Number model	Score
Sample	3	A or Ⓟ	10 + 10 + 2 + 2 = 24	24
1		A or P		
2		A or P		
3		A or P		
4		A or P		
5		A or P		
6		A or P		
7		A or P		
8		A or P		
			Total Score	

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Name Date Time

Sides and Angles: Triangles

1. Cut out the cards. Place the 4 triangle cards in a row. Shuffle the remaining cards.
2. Partners take turns drawing cards and placing them in groups to build a triangle. If a card cannot be placed (a 4th angle or side in the column, for example), return it to the bottom of the deck. Continue until all cards have been drawn.
3. The partner who places the final card to build a triangle takes all the cards in that pile.
4. When all cards have been drawn, use your protractor and straightedge to draw the triangles that match your cards.

Equilateral Triangle	Isosceles Triangle	Scalene Triangle	Right Triangle	2" Line Segment	2" Line Segment
90° Angle	20° Angle	35° Angle	125° Angle	3" Line Segment	35° Angle
55° Angle	2" Line Segment	40° Angle	40° Angle	100° Angle	2" Line Segment
2" Line Segment	7 cm Line Segment	4 cm Line Segment	7 cm Line Segment	4 cm Line Segment	4 cm Line Segment
5 cm Line Segment	6 cm Line Segment	3 cm Line Segment	60° Angle	60° Angle	60° Angle

Name Date Time

Spoon Scramble Record Sheet

Player Name:

Record your letters on the lines below.

_____ _____ _____ _____ _____ _____

Winning Combinations

In each row, record the four cards that are of equal value from two of the rounds that you won.

Name Date Time

Spoon Scramble Record Sheet

Player Name:

Record your letters on the lines below.

_____ _____ _____ _____ _____ _____

Winning Combinations

In each row, record the four cards that are of equal value from two of the rounds that you won.

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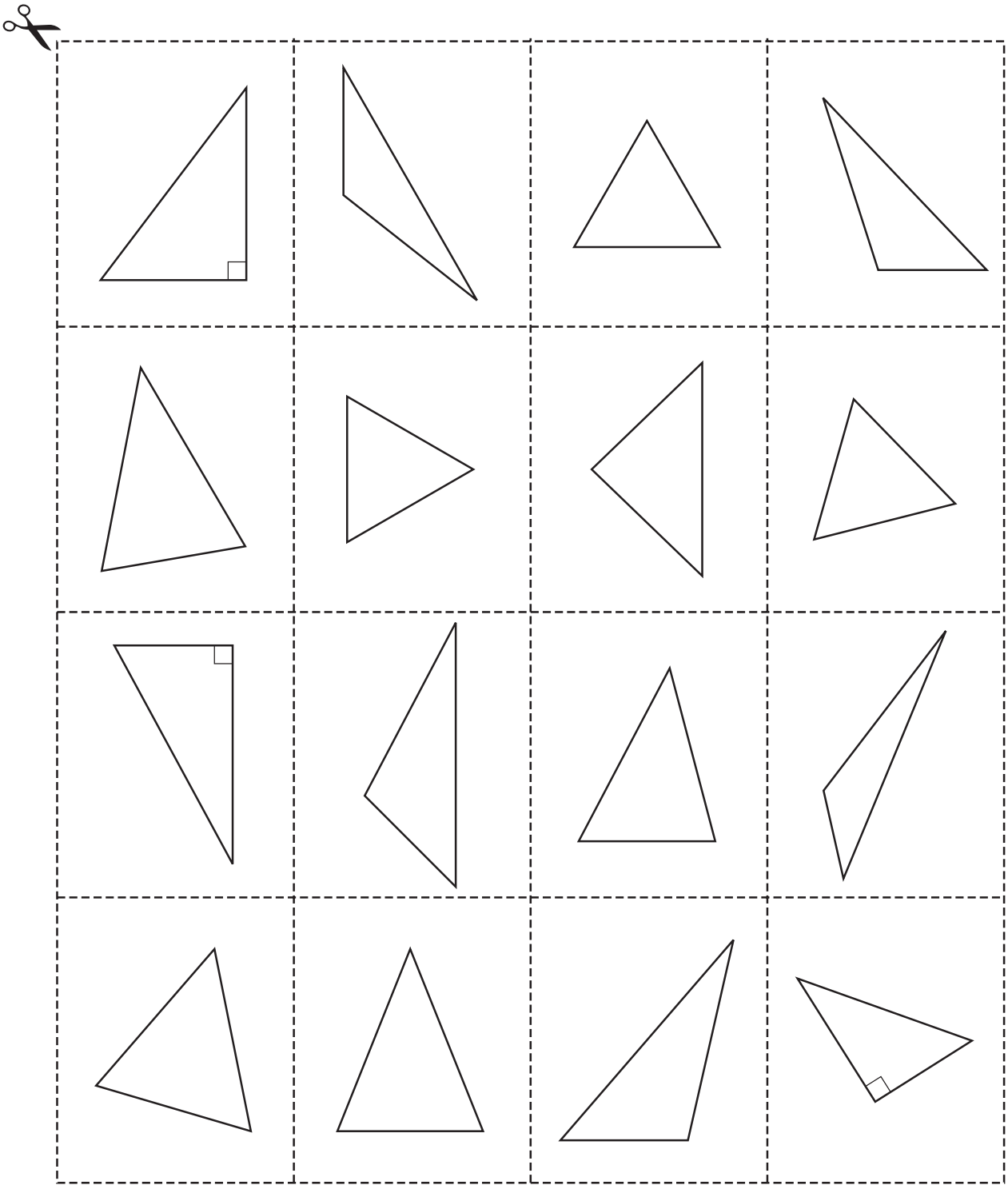
Name Date Time

Triangle Sort

1. Cut out the 16 triangle cards below.

2. Sort them into two different groups. Explain how you sorted them.

3. Sort them into three groups. Explain how you sorted them.



Name Date Time

3-D Shape Sort Property Cards

I have an even number of vertices.	I have no vertices.	I have at least 2 edges that are parallel to each other.	I have an odd number of edges.
One of my vertices is formed by an even number of edges.	I have at least 1 curved edge.	I have fewer than 6 vertices.	I have at least 2 edges that are perpendicular to each other.
All of my surfaces are polygons.	I have at least 1 face (flat surface).	I have at least 1 curved surface.	All of my faces are triangles.
All of my faces are regular polygons.	At least 1 of my faces is a circle.	I have at least 1 pair of faces that are parallel to each other.	**Wild Card:** Pick your own surface property.

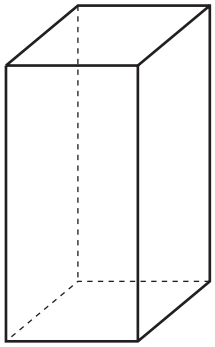
Name Date Time

3-D Shape Sort Property Cards *continued*

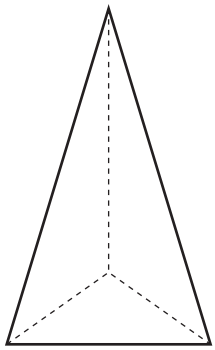
Vertex/Edge	Vertex/Edge	Vertex/Edge	Vertex/Edge
Vertex/Edge	Vertex/Edge	Vertex/Edge	Vertex/Edge
Surface	Surface	Surface	Surface
Surface	Surface	Surface	Surface

Name Date Time

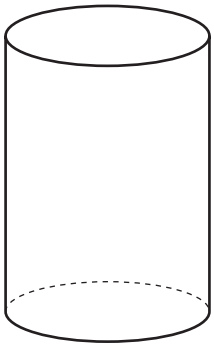
3-D Shape Sort Shape Cards



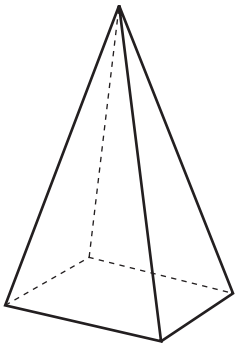
Rectangular Prism



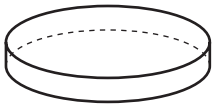
Triangular Pyramid



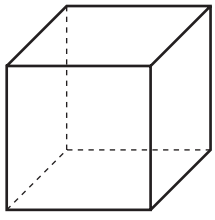
Cylinder



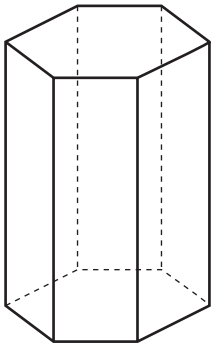
Rectangular Pyramid



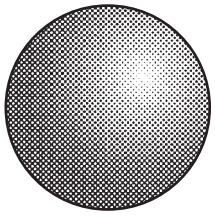
Cylinder



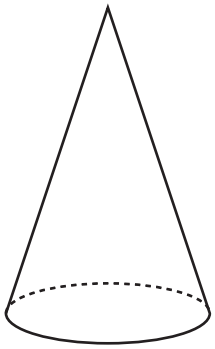
Cube



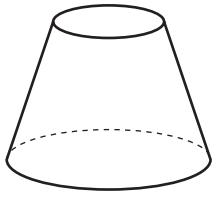
Hexagonal Prism



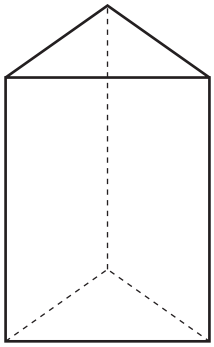
Sphere



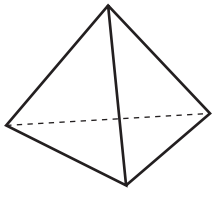
Cone



Truncated Cone



Triangular Prism



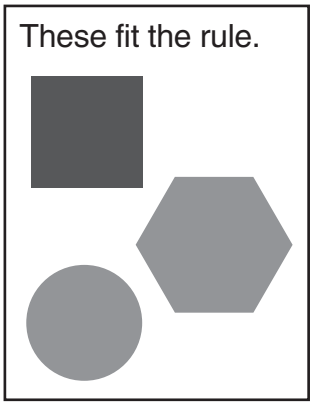
Tetrahedron

Name Date Time

What's My Attribute Rule?

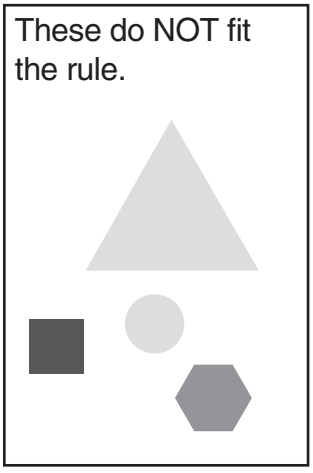
Directions

1. Label one sheet of paper ***These fit the rule.***
2. Label another sheet of paper ***These do NOT fit the rule.***
3. Take turns. Roll the six-sided die once. The player with the lowest number is the first "Rule Maker."
4. The Rule Maker shuffles and places the Attribute Rule Cards facedown.
5. The Rule Maker turns over the top Attribute Rule Card, but does not show it to the other players or tell them what the rule is. For example: *large shapes, but not triangles.*
6. The Rule Maker chooses 3 or 4 attribute blocks that fit the rule on the card. The Rule Maker puts them on the sheet labeled *These fit the rule.*



These fit the rule.

7. The Rule Maker chooses 3 or 4 blocks that do NOT fit the rule. The Rule Maker puts them on the sheet labeled *These do NOT fit the rule.*



These do NOT fit the rule.

8. The other players take turns choosing a block that they think might fit the rule and placing it on that sheet.
9. If the Rule Maker says "No," the player puts the block on the correct sheet. If "Yes," the player gets to suggest what the rule might be. The Rule Maker then tells the player whether his or her rule is correct.
10. The round continues until someone figures out the rule. That person becomes the Rule Maker for the next round.

Name Date Time

What's My Attribute Rule? Cards

small blue shapes	large red shapes	large shapes, but not triangles	circles, but not red
blue and yellow shapes, but not circles	red and yellow small shapes	not triangles or squares	large triangles, but not yellow
large circles, but not red	large circles or squares		

Name Date Time

Where Do I Fit In?

1. Cut along the dotted line to separate the Activity Mat from the property cards.
2. Cut out the property cards.
3. Partners each roll a die: the higher roll stands for angles; the lower roll stands for sides.
4. Shuffle and deal all 12 property cards (6 cards to each player).
5. If a partner rolls angles, that partner places all of his or her angle cards under the appropriate triangles. If a partner rolls sides, that partner places all of his or her side cards under the appropriate triangles.
6. Shuffle the cards again and repeat Steps 3 through 5.

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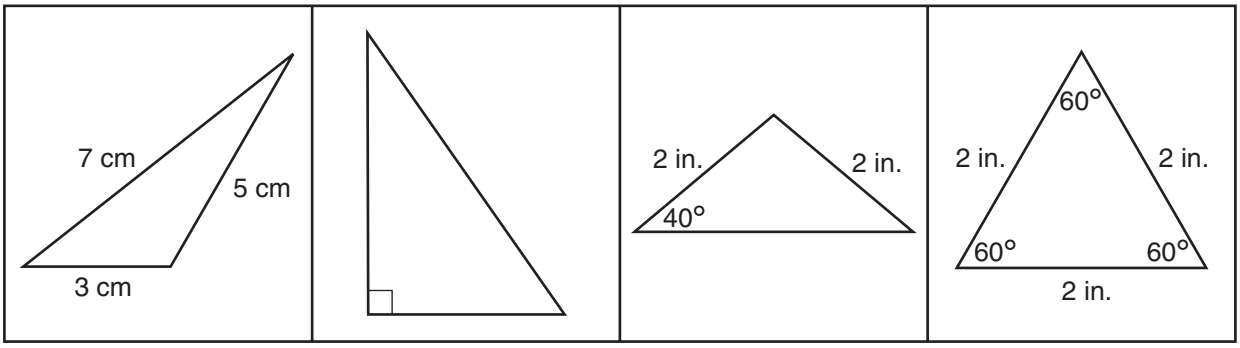
Activity Mat



3 acute angles	3 equal angles	sides all the same length	no two angles with the same measure
sides all with different lengths	two sides with the same length	at least two angles with the same measure	one right angle
two acute angles	no more than two equal sides	one 90° angle	3 acute angles