Grade Four

Classroom

Strategies

Blackline Masters

0	1
2	3
4	5
6	7
8	9

Checks

500

_____/_____/_____

Pay to the order of:_____

_____**Dollars**

Intelligence Unlimited

*For:*_____ _____

501

_____/_____/_____

Pay to the order of:_____

_____**Dollars**

Intelligence Unlimited

*For:*_____ _____

502

_____/_____/_____

Pay to the order of:_____

_____**Dollars**

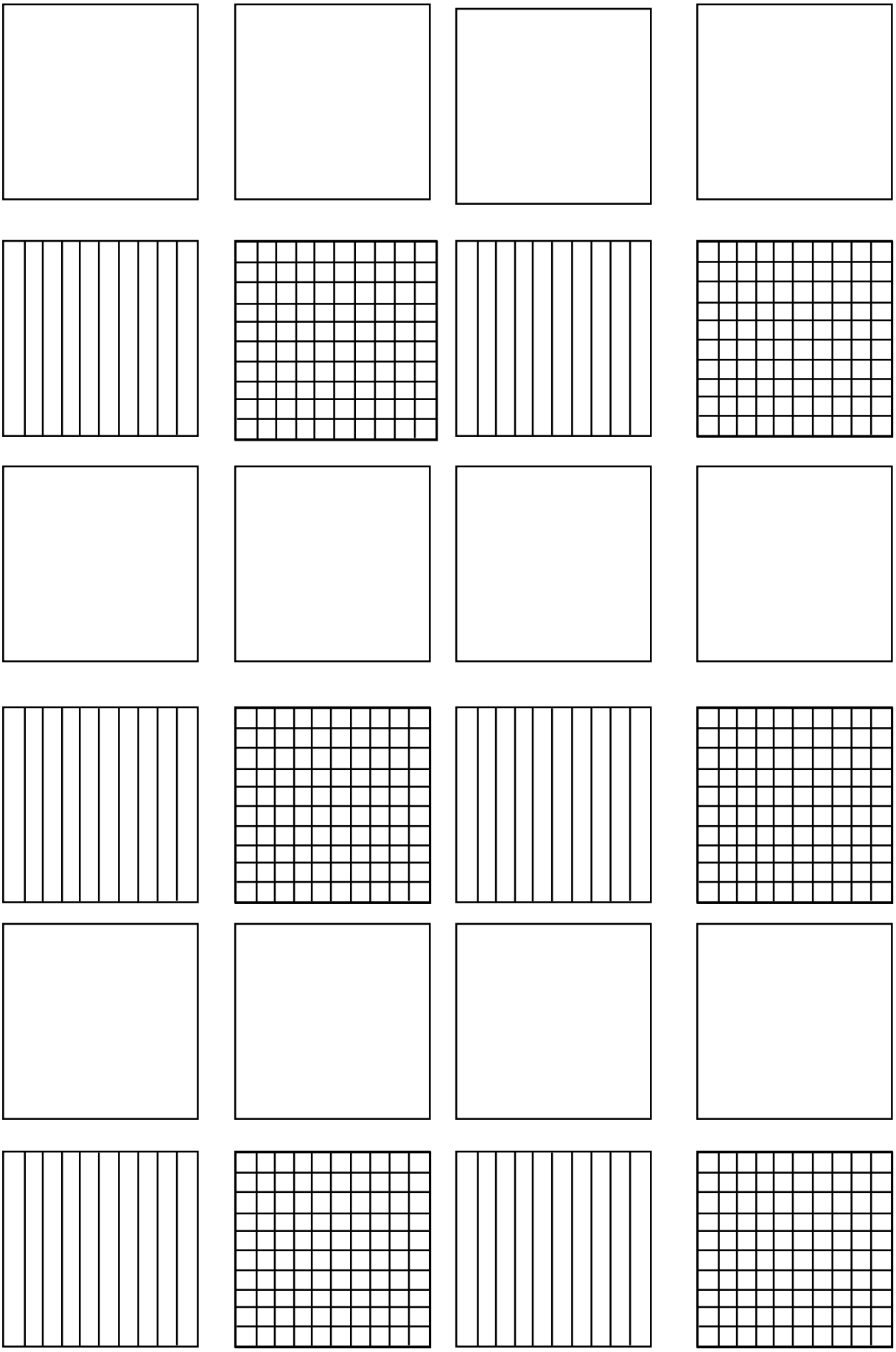
Intelligence Unlimited

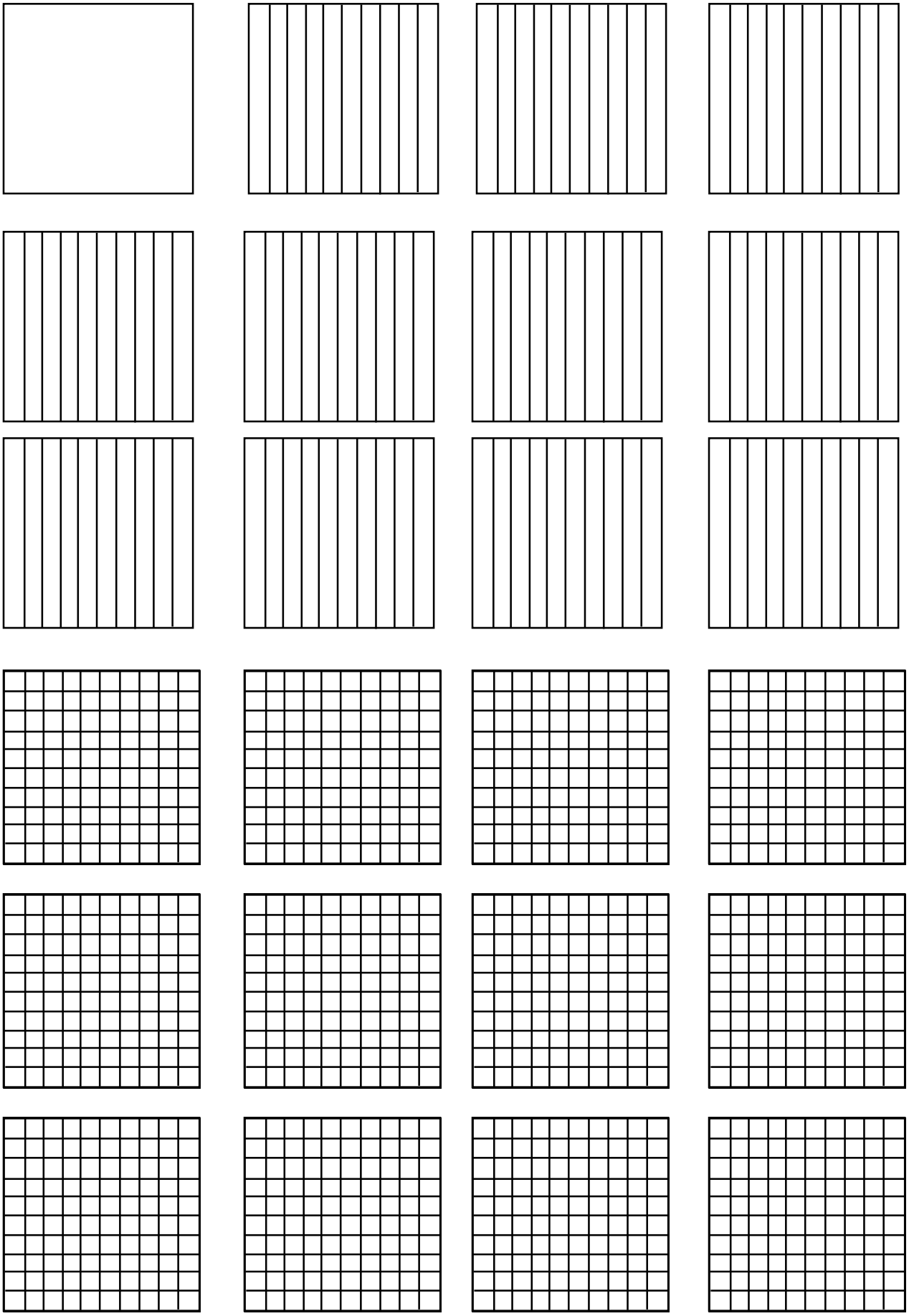
*For:*_____ _____

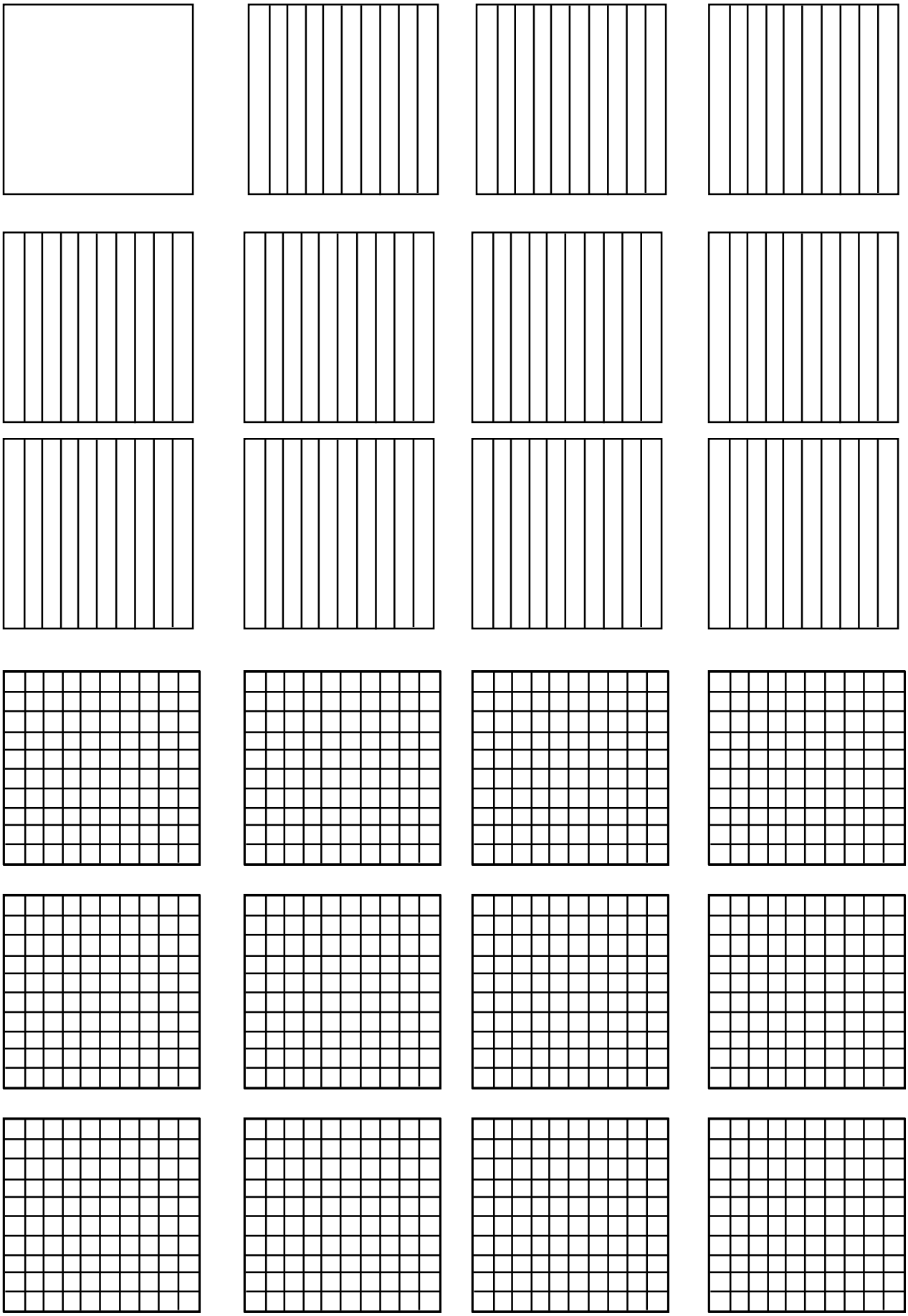
Check Register

Intelligence Unlimited

Date	Number	Description of Transaction	Payment	Deposit	Balance





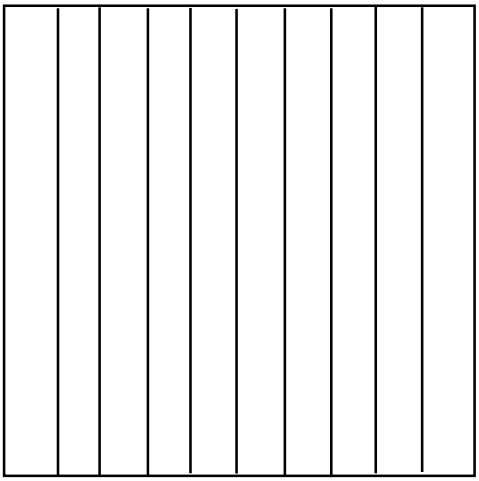


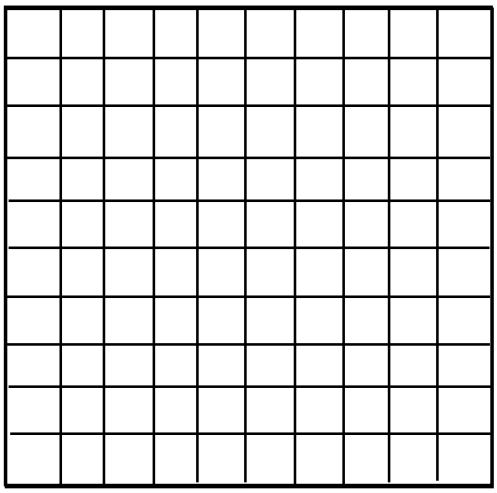
Dollar Derby

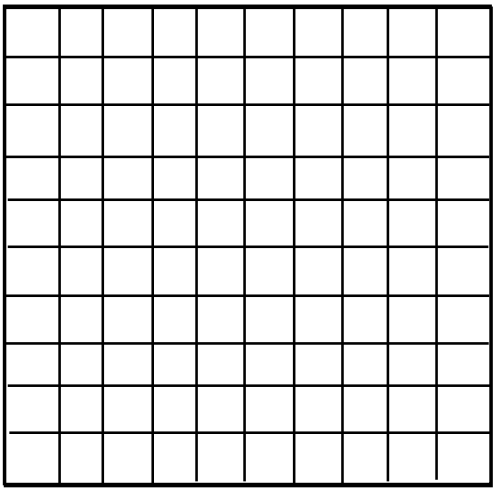
Challenge: What are the rules you need to play this game in reverse (start with one dollar and give it all away)?

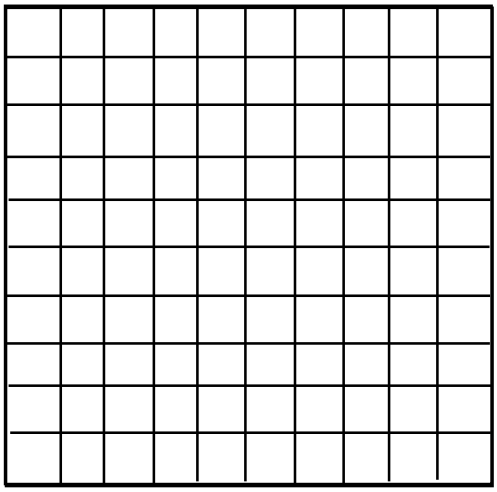
Directions: Take turns rolling a number cube. Collect that many pennies. As soon as you can trade 10 pennies for a dime.The winner is the first to be able to trade 10 dimes for a dollar. At each turn players must write the value of money on their boards in decimal form.

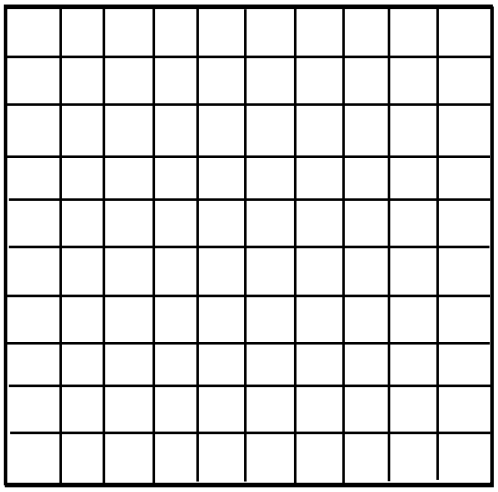
Name_____**Date**___/___/___

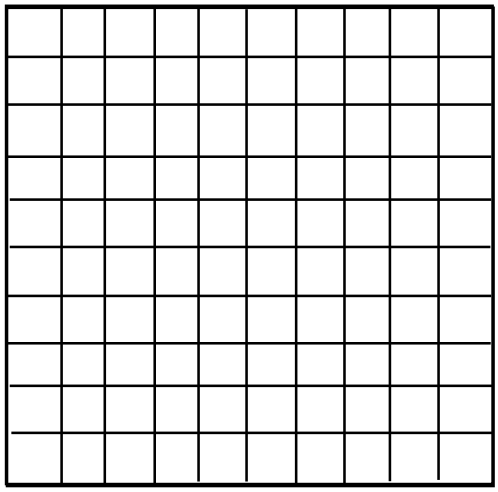








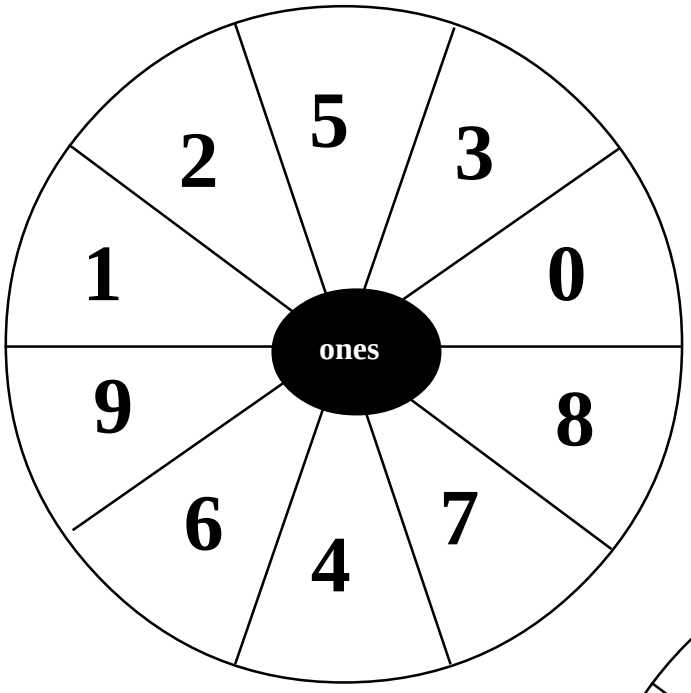


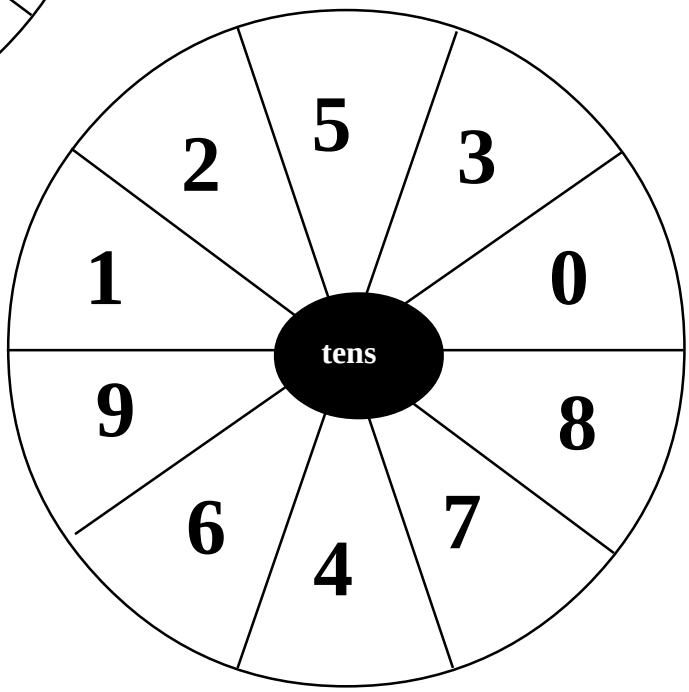


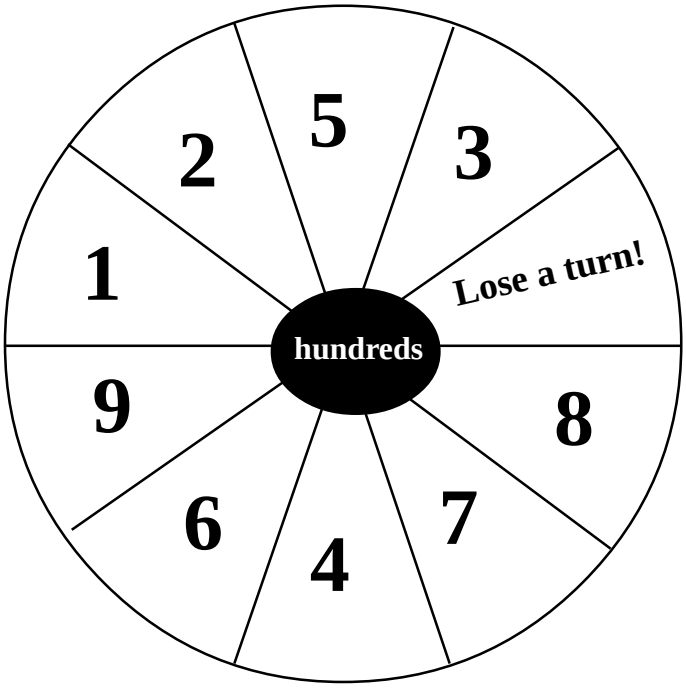
Line Up!

100

1000


ones
5
3
0
8
7
4
6
9
1
2


tens
5
3
0
8
7
4
6
9
1
2


hundreds
5
3
Lose a turn!
8
7
4
6
9
1
2

1	2
4	3
5	6
7	8
9	0

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

0.14	0.10
0.65	0.78
0.04	0.40
0.28	0.82
0.36	0.55

Concentration Cards

0.77	**0.4**
0.5	**0.3**
0.30	**0.061**
0.005	**0.043**
0.01	**0.1**

sixty-seven hundredths	**forty-eight hundredths**
five hundredths	**thirty-five hundredths**
seventy-eight hundredths	**sixty-one hundredths**
five thousandths	**forty-three hundredths**
twenty-one hundredths	**fifty-two hundredths**

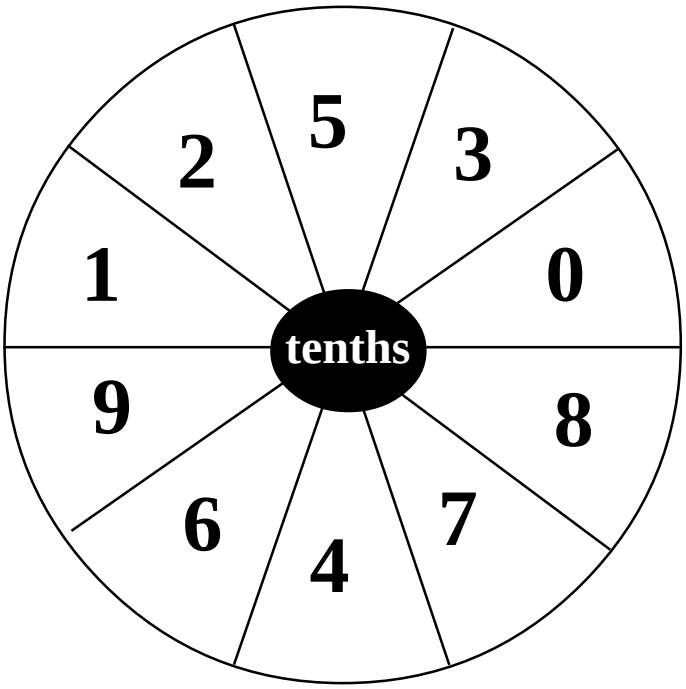
0.67	**0.48**
0.05	**0.35**
0.78	**0.61**
0.005	**0.43**
0.21	**0.52**

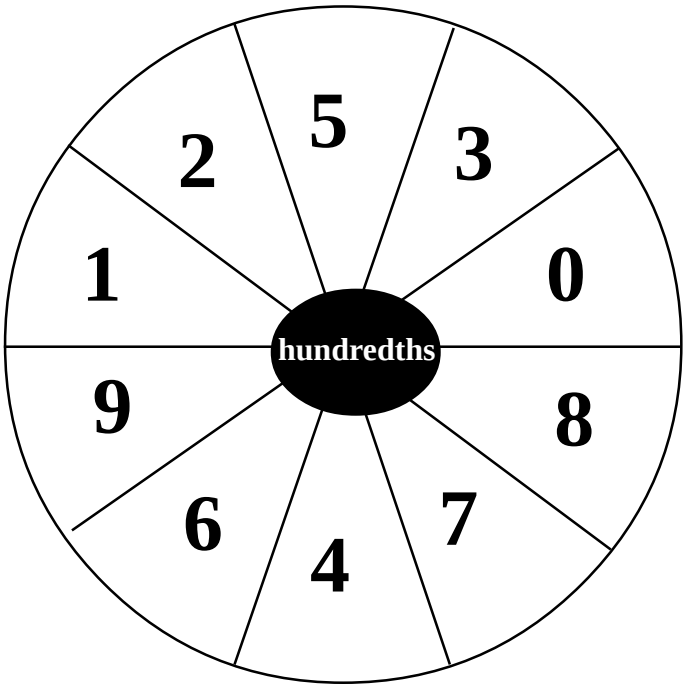
seventy-seven hundredths	**four tenths**
five tenths	**three tenths**
thirty hundredths	**sixty-one thousandths**
five thousandths	**forty-three thousandths**
one hundredth	**one tenth**

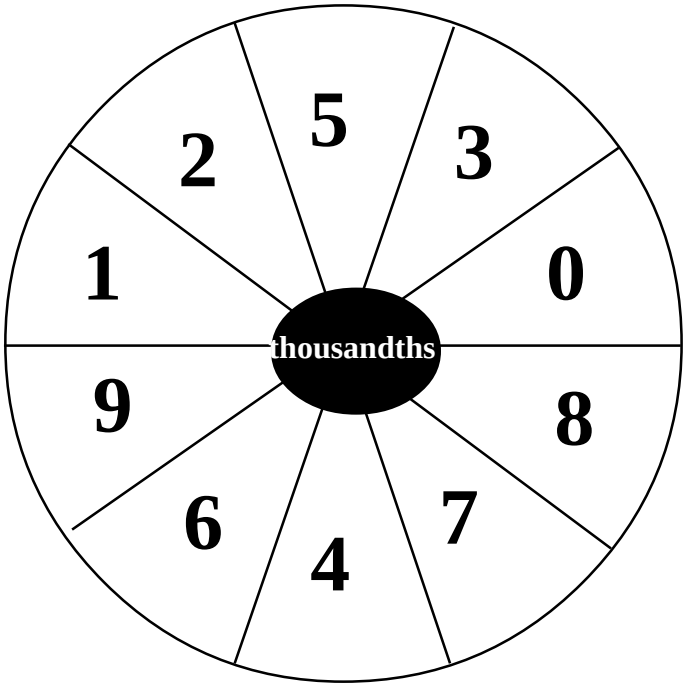
Bingo Cards

		F		
		R		
		E		
		E		

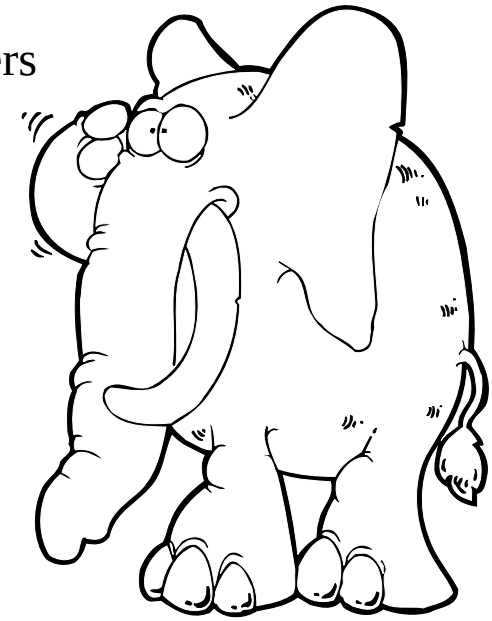
		F		
		R		
		E		
		E		


tenths
5
3
0
8
7
4
6
9
1
2


hundredths
5
3
0
8
7
4
6
9
1
2



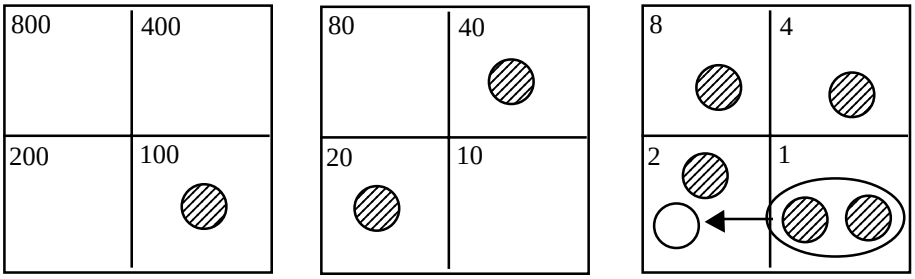
Directions for Decimal Bingo:
Duplicate cards and have students choose and write numbers from zero to 0.999 in their cards. Spin the spinners in succession to determine the numbers to "call". A shorter game (with less choices) can be played with just two spinners and numbers from 0 to 0.99.



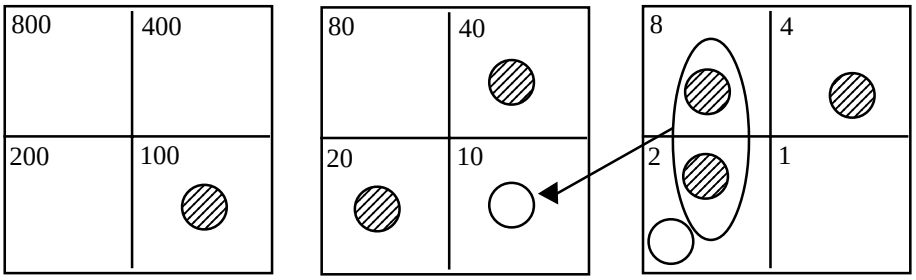
Give children opportunities to build numbers on the overhead so that all can see correct models and then allow them to work with a partner to practice building many numbers. Try modeling these numbers: 43,59, 137, 524, 691. You may wish to have students work with partners at their desks and take turns showing their models on the overhead.

Adding with Papy's Computer

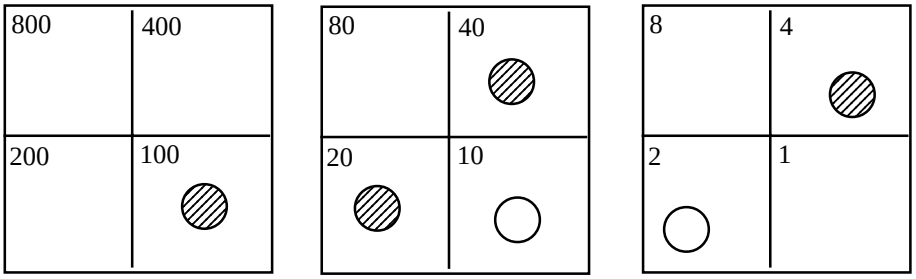
Addition of sums to 999 can be done on the boards. For example: If you are adding 129 to 47, you would first build 129 and then build 47 on the same boards. (You would put counters on the 100, 20, 8, 1 for the 129 and then the 40, 4, 2,1 for 47.) To do the addition, you must rearrange the counters on the boards so that each board has no more than one counter in each square. The two counters on the 1 are added together and exchanged for one on the 2.



Now there are two counters on the 2. One on the 2 should be added to the counter on the 8 and exchanged for one marker on the 10 rather than changing two 2's for one counter on the 4. This is to avoid having two counters in the same space. At this point there is only one marker on any square.



By adding the numbers on which there is a counter you have the answer to the addition problem.

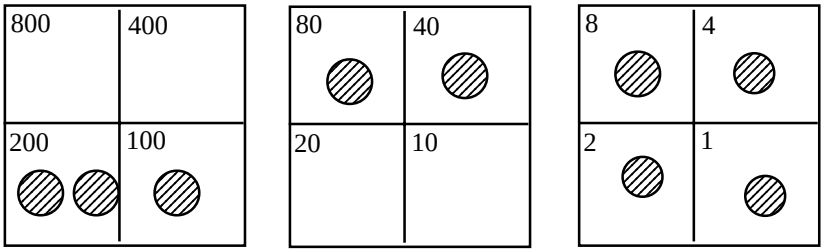


100 + 40 + 20 + 10 + 4 + 2 = 176

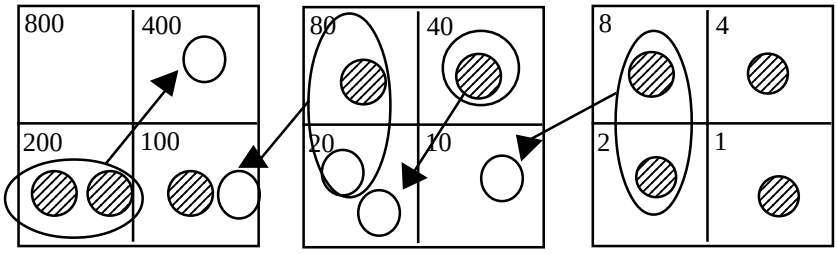
Try these examples: 56+ 29, 234 + 217, 603 + 28 (You may wish to try them yourself before working with the students.)

A more difficult problem involves several steps in trading:

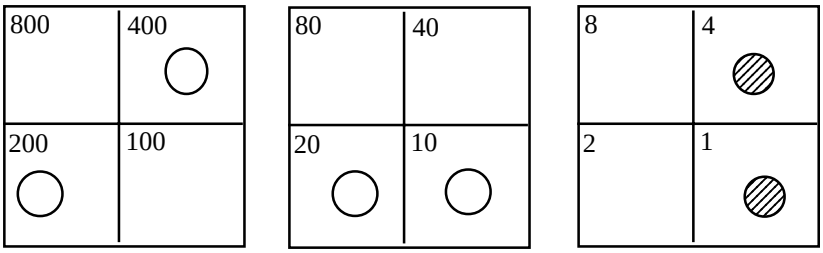
a. Build both numbers.



b. Combine 2 and 8 to make a 10.
c. Trade a 40 for two 20's and add 20 + 80 to make 100.



d. Combine two 200's to make a 400.
e. Combine two 100's to make a 200.

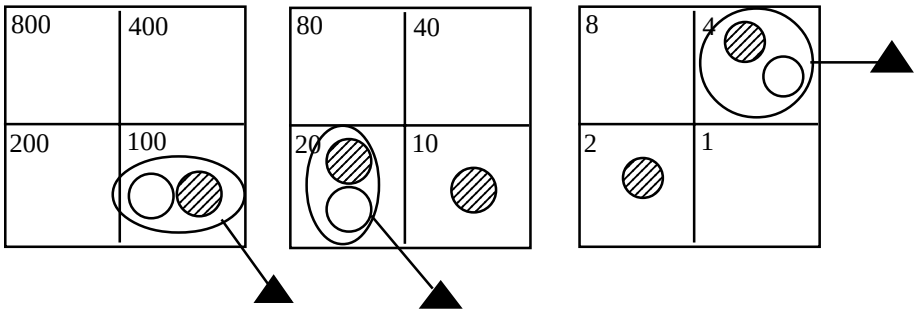


400 + 200 + 20 = 10 + 4 + 1 = 6356

Papy's Computer appeals to many students while others find it difficult to go beyond modeling of numbers and simple addition. Encourage children to work with partners to both assist and monitor each other.

The boards may be used for subtraction, but many third grade children will need a great deal of guidance. You may decide to use Papy's Computer for addition only.

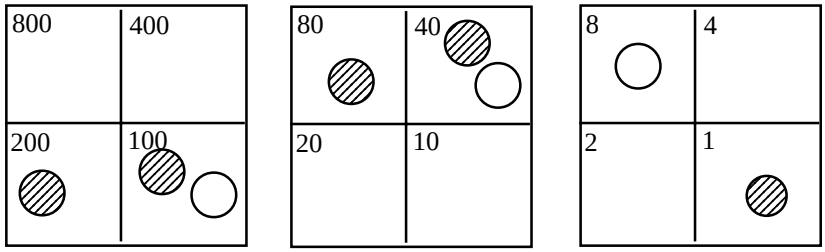
Here is one simple subtraction example. Two different colored counters are helpful. Use counters to show 136 and counters to model 124. Notice this is building a type of comparative model.



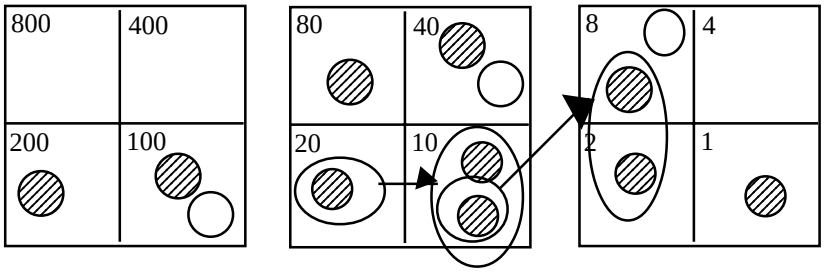
If there are equal counters of the two colors in a square, they cancel each other out and are removed from the board. The counters remaining on the board, when all of the white counters are removed, name the difference or the subtraction problem.

Below is a more complex model. It requires us to make a fair trade and exchange one counter of higher value for two others of an equal value. Use to show 361 and to show 148.

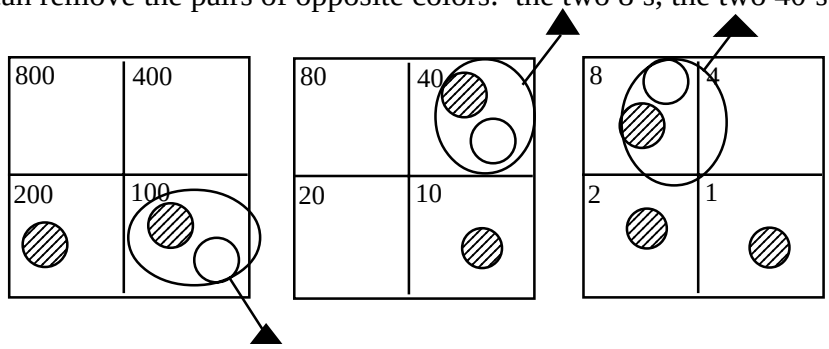
361- 148= 213



Because you need to remove both 148 in the lighter counters and 148 from the original set, you must trade to be able to remove the counter from the 8. Trade one 20 for two 10's. Then trade for an 8 and a 2.



Now you can remove the pairs of opposite colors: the two 8's, the two 40's and the two 100's.



200 + 10 + 3 = 213

Papy’s Computer

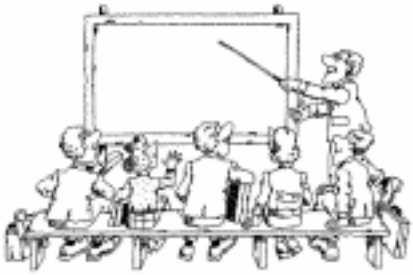
800	400
200	100

80	40
20	10

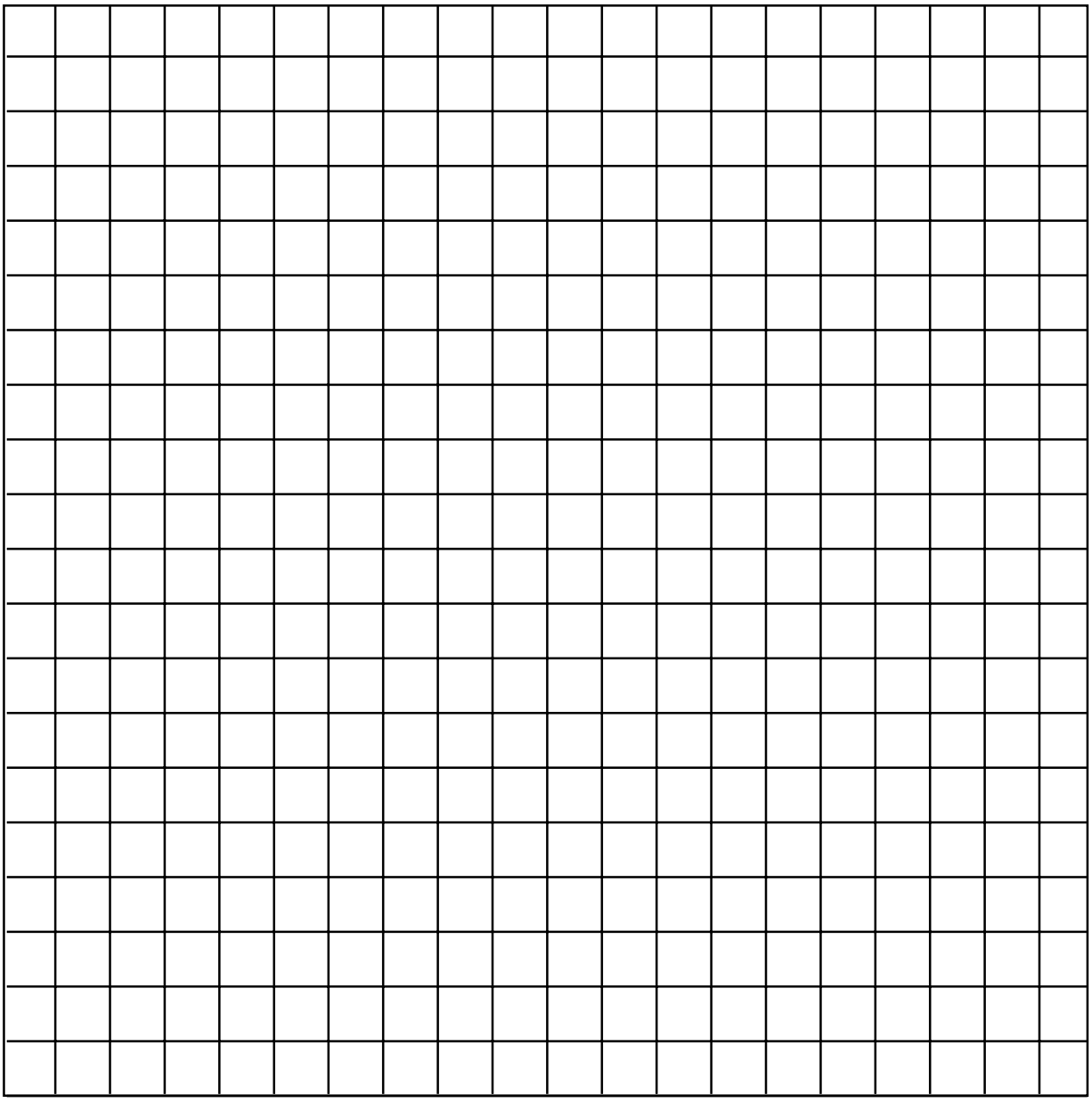
8	4
2	1

One-Centimeter Graph Paper

RAGING RECTANGLES



Number of Players: Two
Materials: Two number cubes, gameboard, crayon per player
Directions: In turn each player rolls the cubes. A player outlines and colors a rectangle on the gameboard to match the cubes. (Ex. a roll of 6 and 3 = a 6 x 3 rectangle or a 3 x 6 rectangle). Player writes the total number of squares (area) in the center of the rectangle. A player loses a turn when he rolls and cannot fit his rectangle on the gameboard. Game is over when neither player can draw a rectangle. Winner is the player with the most squares colored on the gameboard.



Name_____**Date**___/___/___

Name_____Date___/___/___

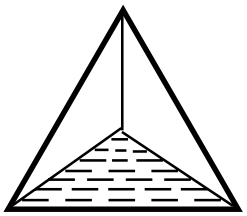
My North Carolina Trip

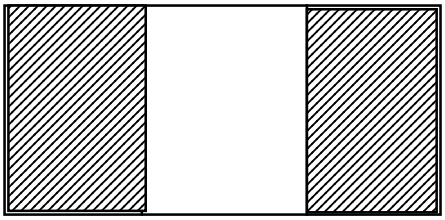
Begin	End	No. of Days	Distance

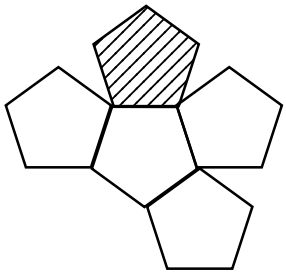
Name_____Date___/___/___

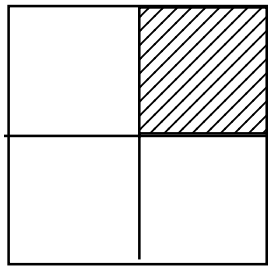
My North Carolina Trip

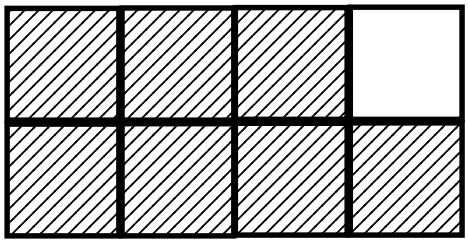
Begin	End	No. of Days	Distance

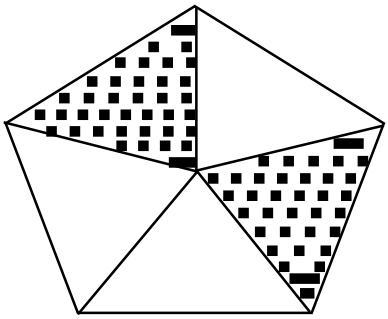












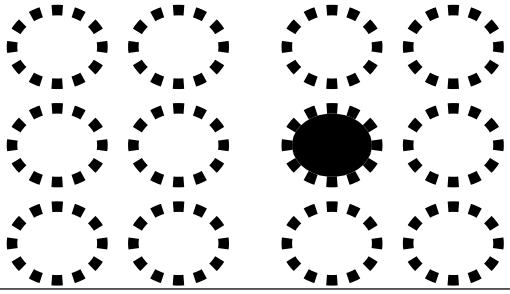
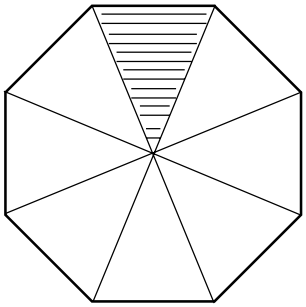
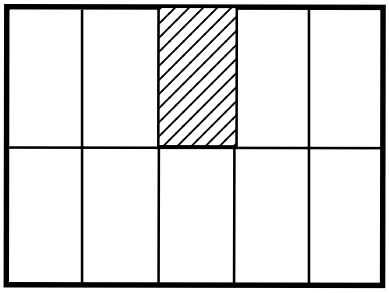
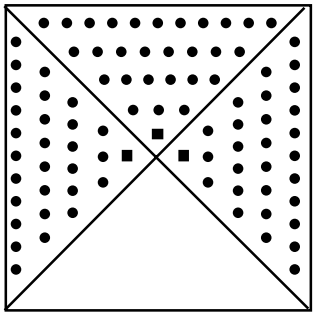
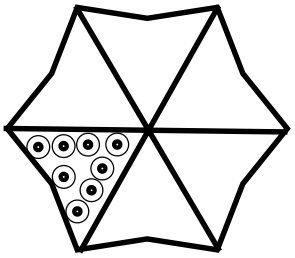
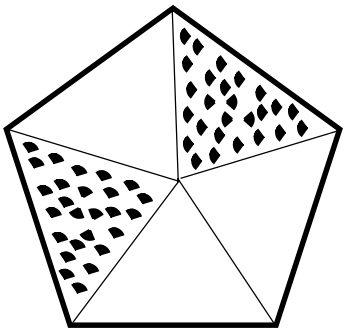
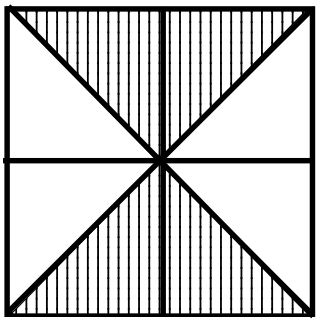
$\frac{2}{16}$

$\frac{3}{24}$

$\frac{6}{8}$

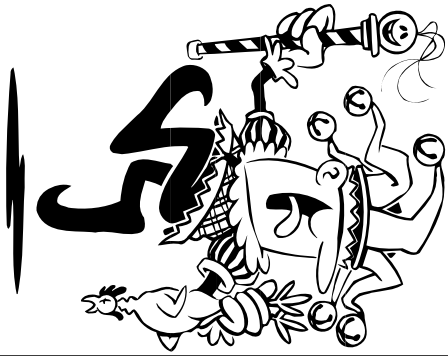
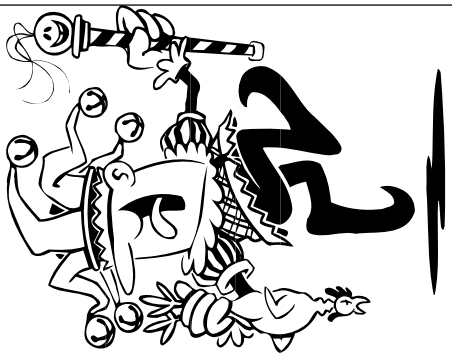
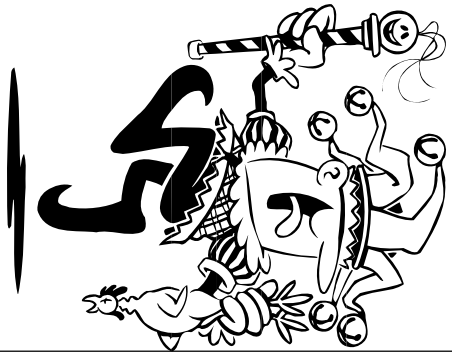
$\frac{9}{12}$

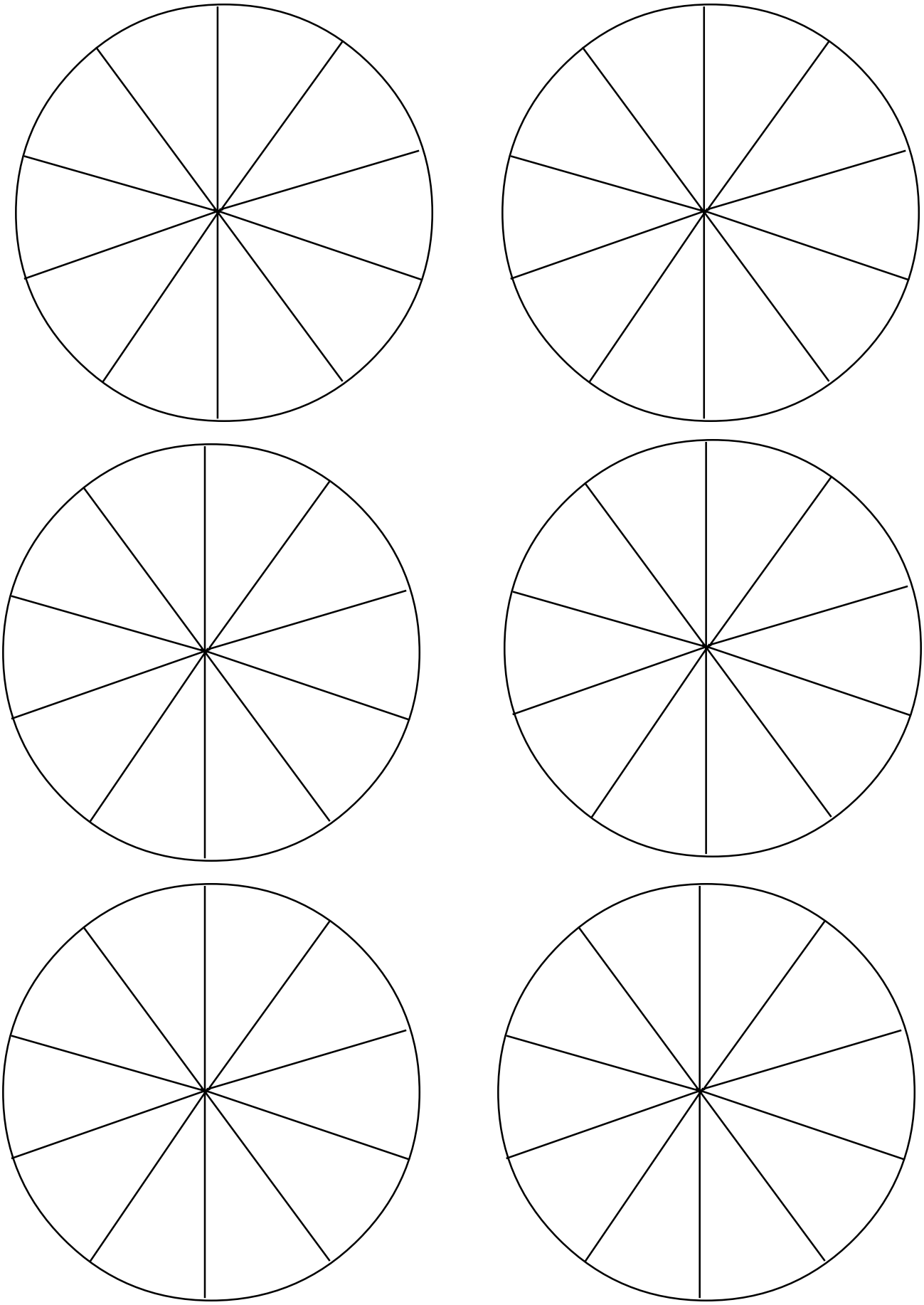
$\frac{1}{12}$	$\frac{1}{2}$
$\frac{1}{10}$	$\frac{1}{3}$
$\frac{5}{8}$	$\frac{1}{4}$
$\frac{1}{8}$	$\frac{2}{3}$
$\frac{3}{4}$	$\frac{1}{5}$

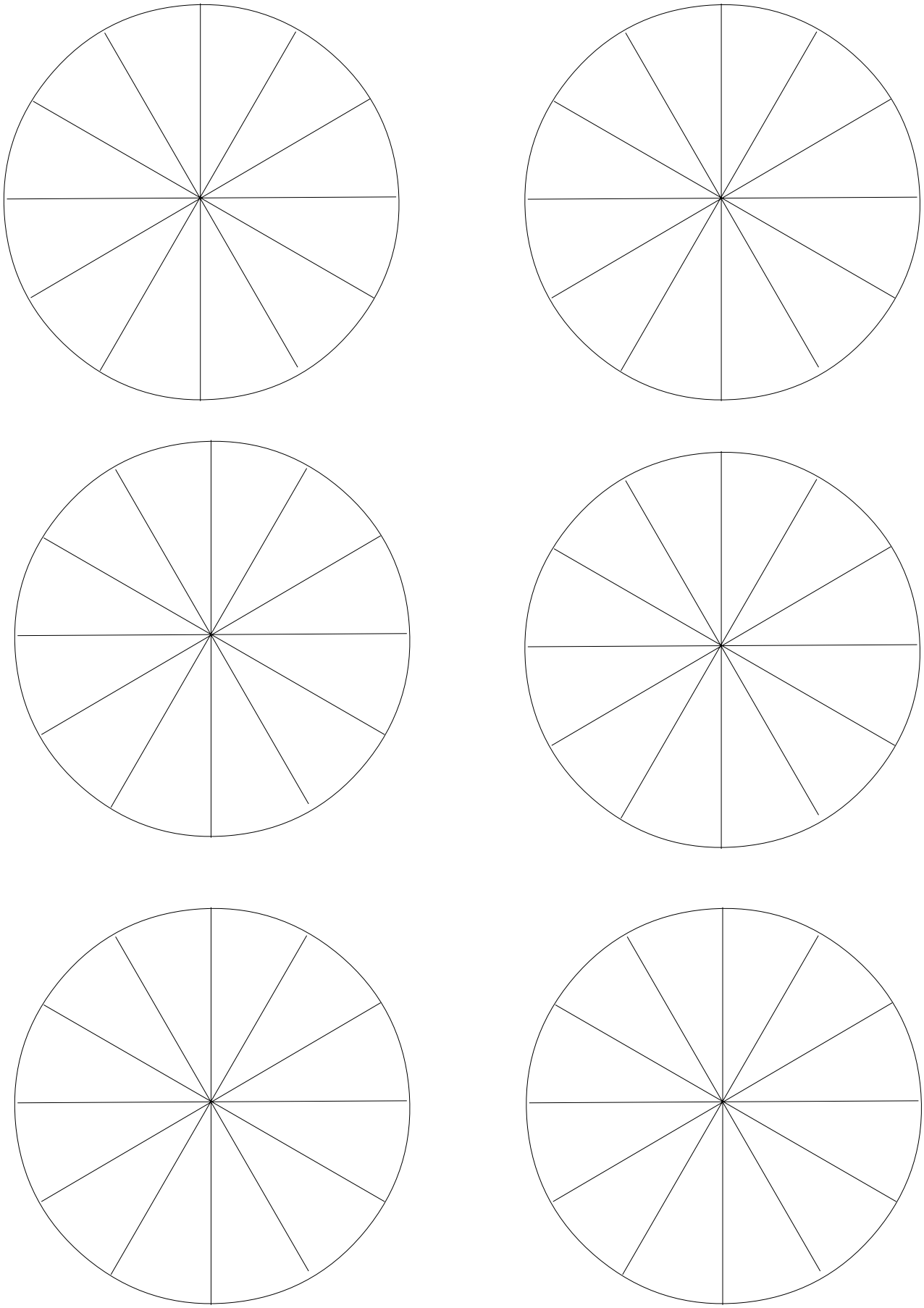
2/5	
1/9	
7/8	
	
	

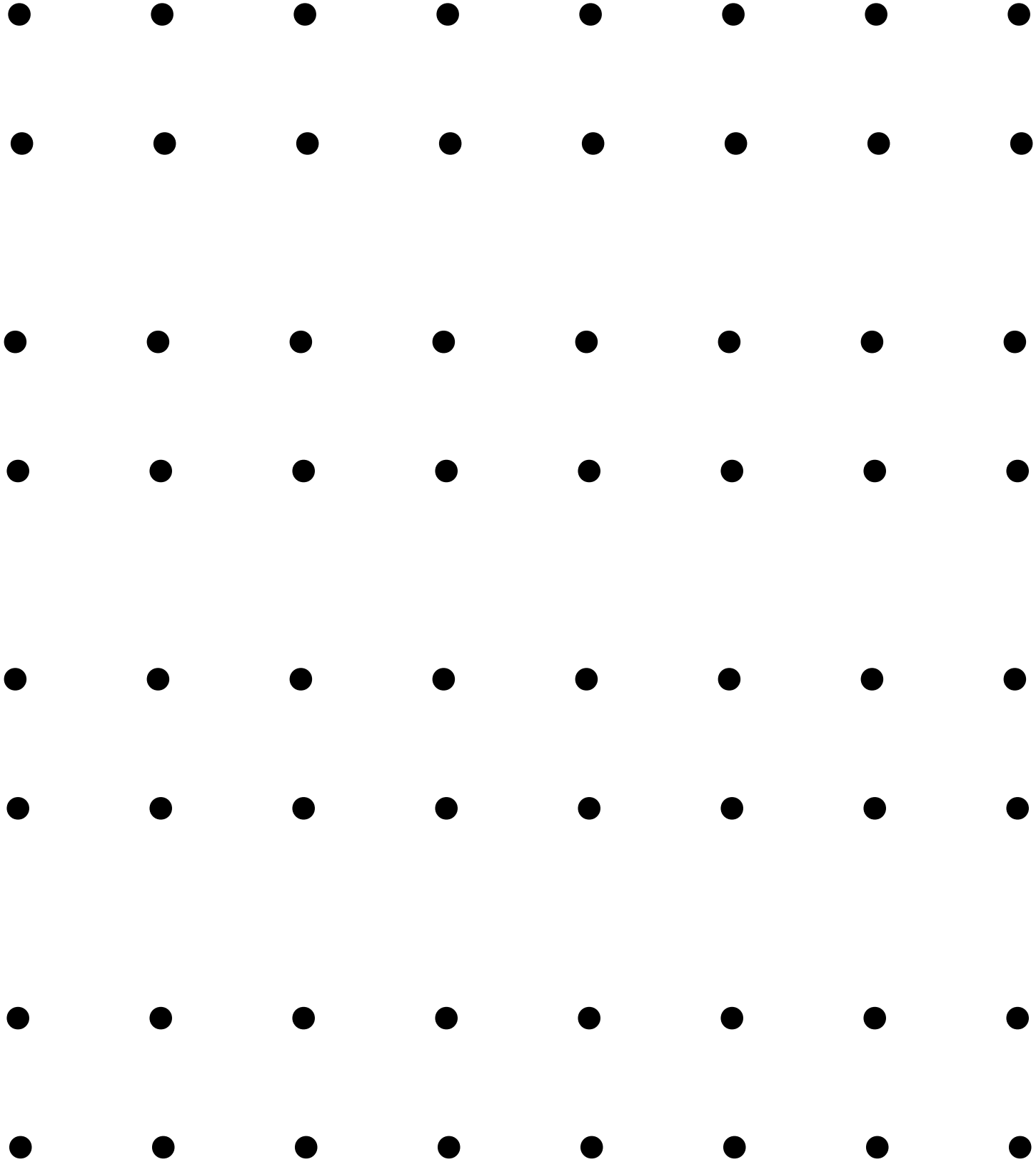
$\frac{2}{24}$	$\frac{3}{36}$	$\frac{15}{24}$	$\frac{21}{24}$	$\frac{2}{12}$
$\frac{2}{20}$	$\frac{3}{30}$	$\frac{10}{16}$	$\frac{14}{16}$	$\frac{3}{18}$

$\frac{8}{12}$	$\frac{4}{20}$
$\frac{4}{6}$	$\frac{2}{10}$
$\frac{6}{12}$	$\frac{5}{10}$
$\frac{3}{12}$	$\frac{4}{12}$
$\frac{2}{8}$	$\frac{2}{6}$

4 | 10	9 | 15
	
	
	







Hundred Board

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

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

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11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
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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

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41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
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81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

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11	12	13	14	15	16	17	18	19	20
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91	92	93	94	95	96	97	98	99	100

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
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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

Two Hundred Board

101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170
171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190
191	192	193	194	195	196	197	198	199	200

Three Hundred Board

201	202	203	204	205	206	207	208	209	210
211	212	213	214	215	216	217	218	219	220
221	222	223	224	225	226	227	228	229	230
231	232	233	234	235	236	137	238	239	240
241	242	243	244	245	246	147	248	249	250
251	252	253	254	255	256	157	258	259	260
261	262	263	264	265	266	167	268	269	270
271	272	273	274	275	276	177	278	279	280
281	282	283	284	285	286	187	288	289	290
291	292	293	294	295	296	197	298	299	300

DIZZY DIVISION

```
      7 7 9
8 | 6, 3 3 4
    5 6
      6 3
      5 6
        7 4
        7 4
```

```
        2 4 r 5
20 | 4, 0 9 8
     4 0
         9 8
         8 0
           8
```

```
        9 6 4 r 5
6 | 5, 8 0 9
    5 4
      4 0
      3 8
        2 9
        2 4
          5
```

```
      3 0 0 7 r 1
9 | 2, 7 6 4
    2 7
      0 6
        0
        6 4
        6 3
          1
```

```
        1 8 0
9 | 9 7 2
    9
      7 2
      7 2
```

```
        5 9
8 | 4, 0 7 2
    4 0
      0 7
        0
        7 2
        7 2
```

```
        9 6 1 r 5
7 | 6, 8 3 1
    6 4
      4 3
      4 2
        1 1
          7
          5
```

```
        8 5 4 r 1
5 | 4, 2 8 1
    4 0
      2 8
      2 5
        2 1
        2 0
          1
```

YOU BE THE JUDGE!

Three students worked on their homework assignments. John read his library book for one-third of an hour. Jim completed his math problems in one-sixth of an hour. Maria studied her spelling words for $\frac{6}{12}$ of an hour. The amount of time the three students spent on their homework is less than one hour.	Sam ate three of the eight cookies mother baked. Ben ate one of the eight cookies. Together they ate $\frac{4}{16}$ of the cookies.
Susan walked her dog for a quarter mile on Monday and for for half a mile on Tuesday. On Wednesday, Susan walked her dog for $\frac{5}{8}$ of a mile. If her goal is to walk for one and a half miles for the week, Susan only needs to walk a total of a quarter mile on Thursday and Friday.	For a fifth grade student to stay healthy, one-fifth of the foods eaten should be vegetables and two-fifths of the foods eaten should be grains. Therefore, 0.3 of the foods that a fifth grader eats should be vegetables and grains.
At the deli, Jay ordered 1.25 pounds of ham, 1.50 pounds of turkey, and 0.75 pounds of cheese. Jay purchased a total of $2\frac{3}{4}$ pounds of food.	$4\frac{3}{6} + 1\frac{5}{6} = 6\frac{1}{3}$
Jane and Bill need $2\frac{1}{4}$ cups of cucumbers, 1 cup of onions, and $\frac{2}{4}$ cup of cheese to make a snack. The total amount of vegetables needed to make their snack equals $3\frac{3}{4}$ cups.	$\frac{3}{4} + \frac{1}{2} + \frac{1}{4} + \frac{4}{8} + \frac{8}{8} + \frac{1}{4} = 3\frac{1}{4}$

GROUP A

19 7

61 46

GROUP B

72 23 88

54

3000	140	1400	4500
1800	4200	400	1200
1000	350	3500	630
490	5400	1000	2500

GROUP A

19 7

61 46

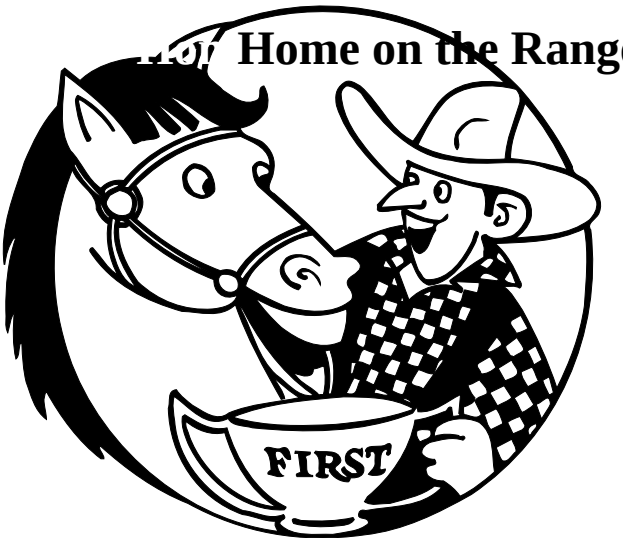
GROUP B

72 23 88

54

3000	140	1400	4500
1800	4200	400	1200
1000	350	3500	630
490	5400	1000	2500

Home on the Range!

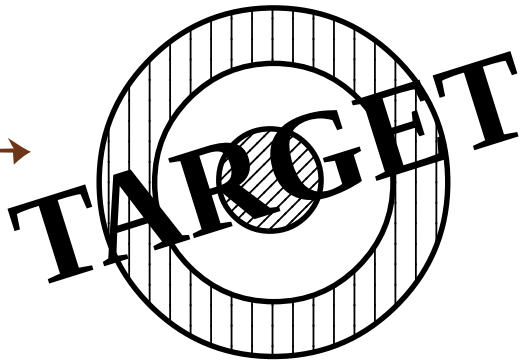


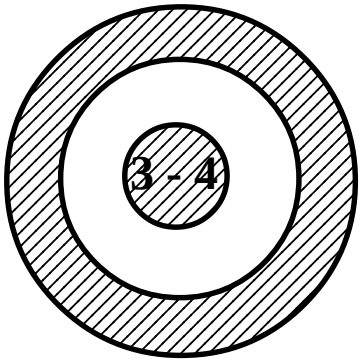
Range Cards

0 - 10
10 - 20
20 - 30
30 - 40

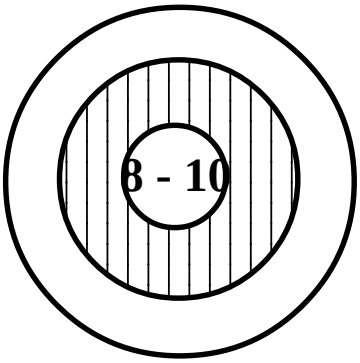
514 ÷ 15	**629 ÷ 17**	**808 ÷ 43**
463 ÷ 22	**89 ÷ 11**	**900 ÷ 24**
203 ÷ 29	**864 ÷ 62**	**84 ÷ 26**
620 ÷ 24	**945 ÷ 41**	**86 ÷ 43**
93 ÷ 31	**502 ÷ 37**	**982 ÷ 42**

Two players need a calculator, two number cubes, and pencil and paper to record scores. The flow chart below gives the directions for play. Each round uses a different target. The goal is to get a product within the designated range. The winner is the player with the most points at the end of 7 rounds.

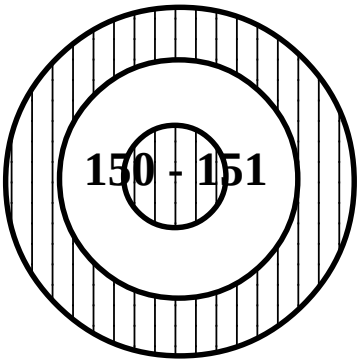




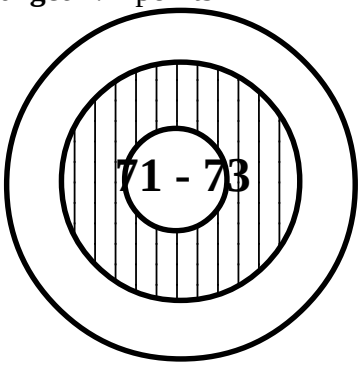
Target 1: 4 points



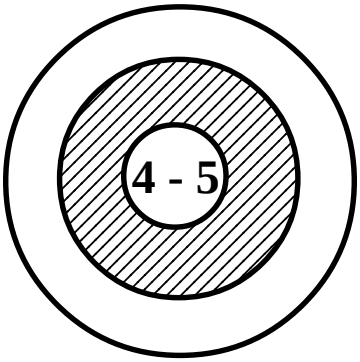
Target 2: 3 points



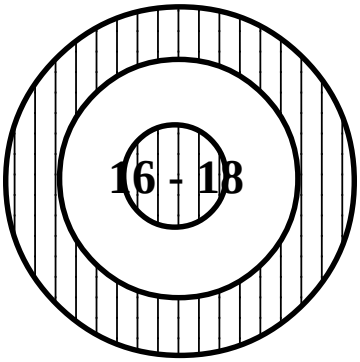
Target 3: 2 points



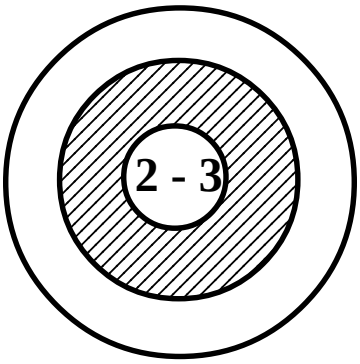
Target 4: 3 points



Target 5: 4 points



Target 6: 3 points



Target 7: 4 points