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MATH AT HOME

We are pleased to introduce our Math at Home resource for schools to share with their families. Inside, you will find a variety of games that can be sent home with students to play with a parent or guardian. Each of these games will help students consolidate key number sense skills that they have been working on in class. Teachers will be able to use their results from the Continuum-Based Math diagnostics to decide which games would be the most suitable for each student.

We recommend that the instruction cards and game cards be made of durable materials and/or laminated as appropriate, and then placed in resealable bags to be sent home. We also recommended that students play the game at school prior to it being sent home.

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MATH AT HOME
ACKNOWLEDGEMENTS

We would like to thank all the educators involved in the creation of this project.

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COVER THE NUMBER

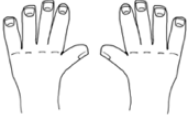**Materials:**
- Game board, one die
- Counters
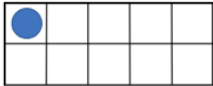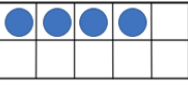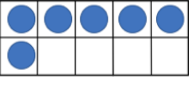
Instructions:
1. Start at the indicated rectangle.
2. Roll a dice and move around the outside of the gameboard.
3. Cover a number in the middle with a counter according to whichever number they land on.
4. Continue until all the numbers are covered

What this is good for:
- Careful counting including knowing that the order in which the objects are counted doesn't affect how many there are.

C1, C2, C3, C4, C5, C8

Start here →

Cover the number

1 2 3 4 5 6 7 8 9

1 2 3 4 5 6 7 10

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RAINY DAY MATH GAME

Materials:

- Clouds with numbers up to ten – foam/raindrops

Instructions:

1. Choose a cloud.
2. Match the number of raindrops to the numeral on the cloud

What this is good for:

- Careful counting including knowing that the order in which the objects are counted doesn't affect how many there are.

C1 C2 C3 C4 C5 C8

1

2

3

4

5

6

7

8

9

10

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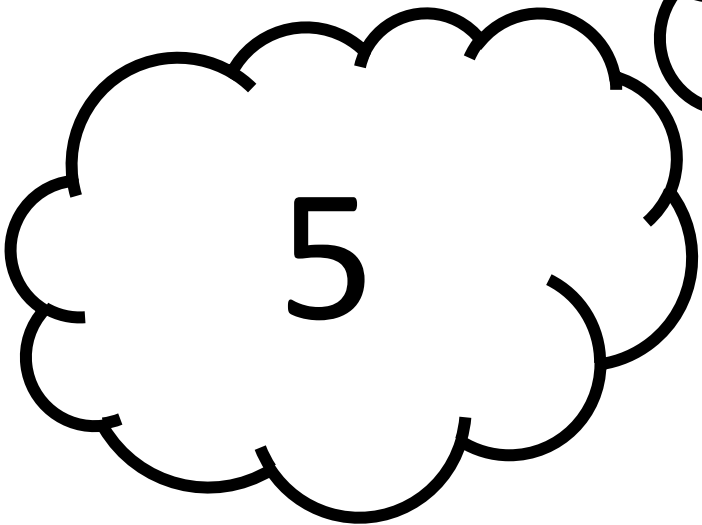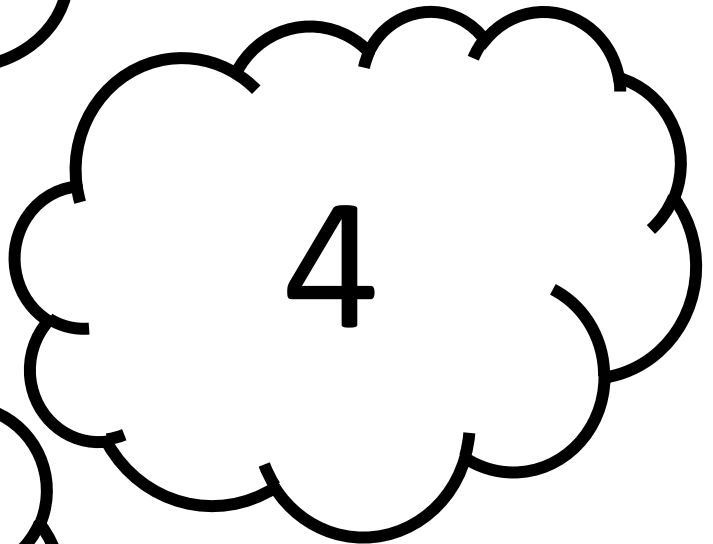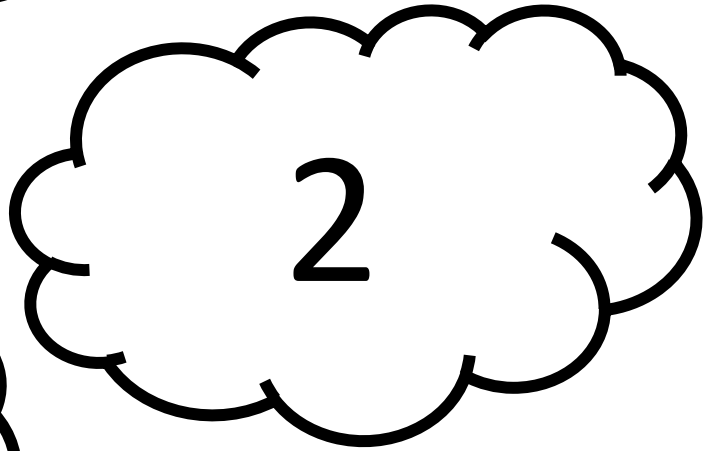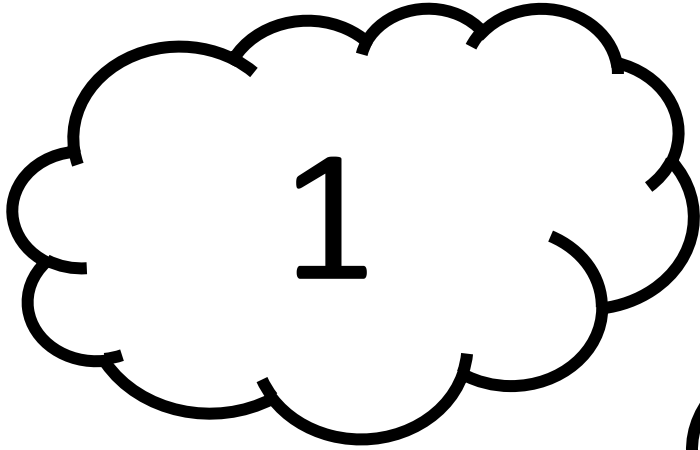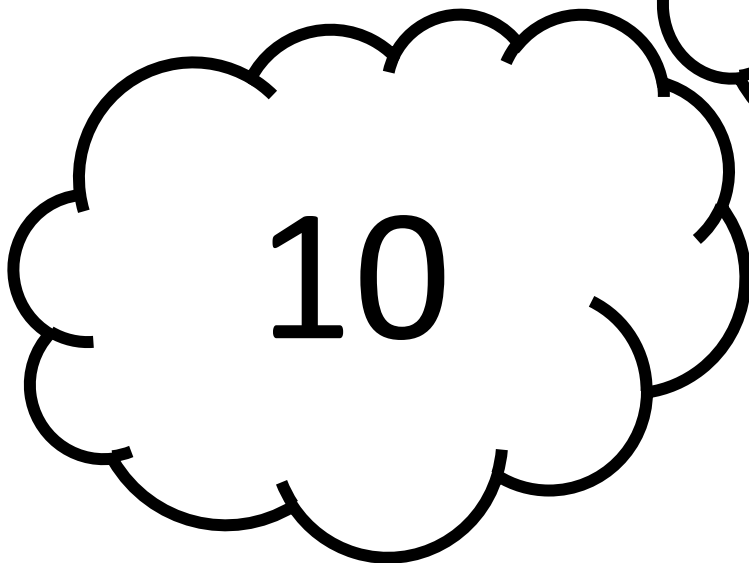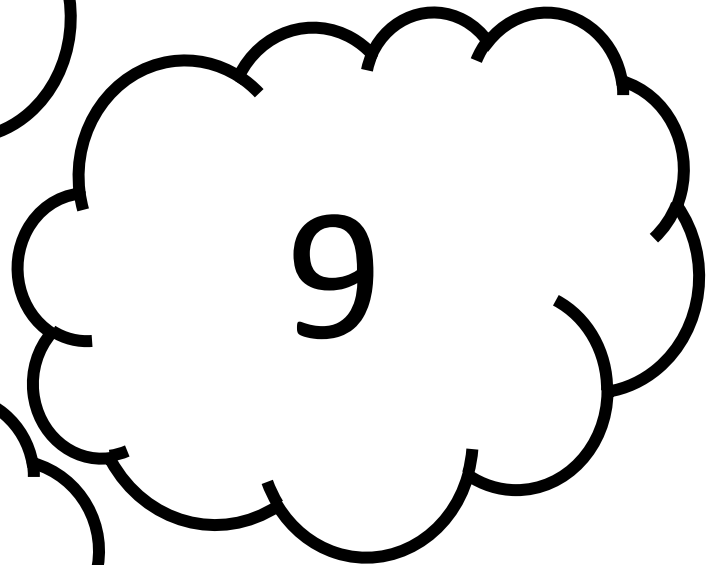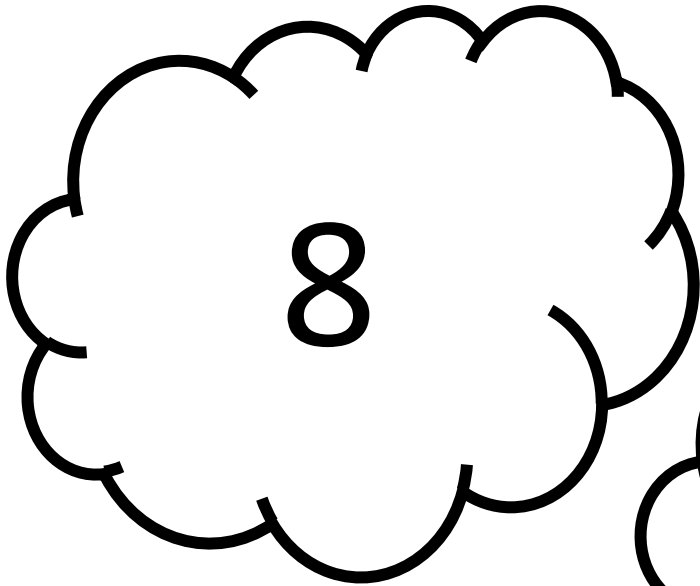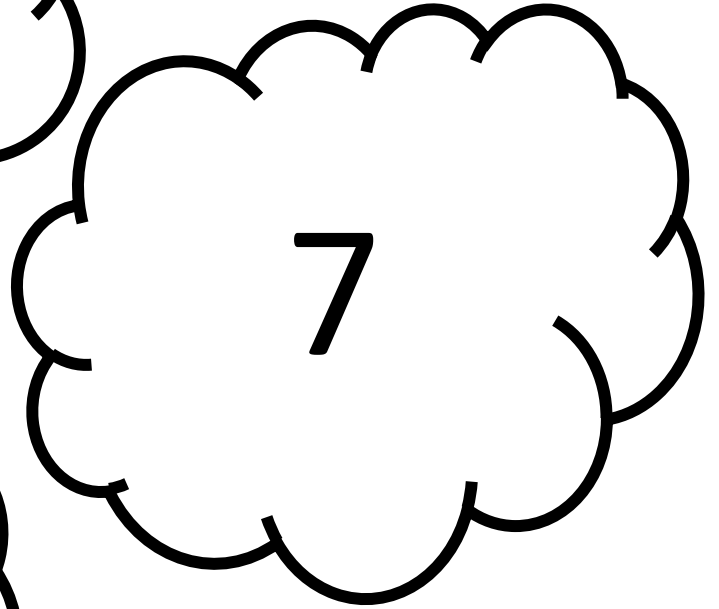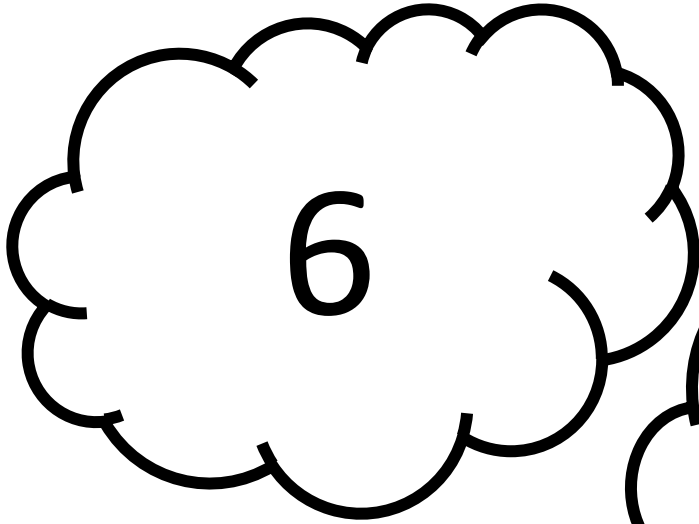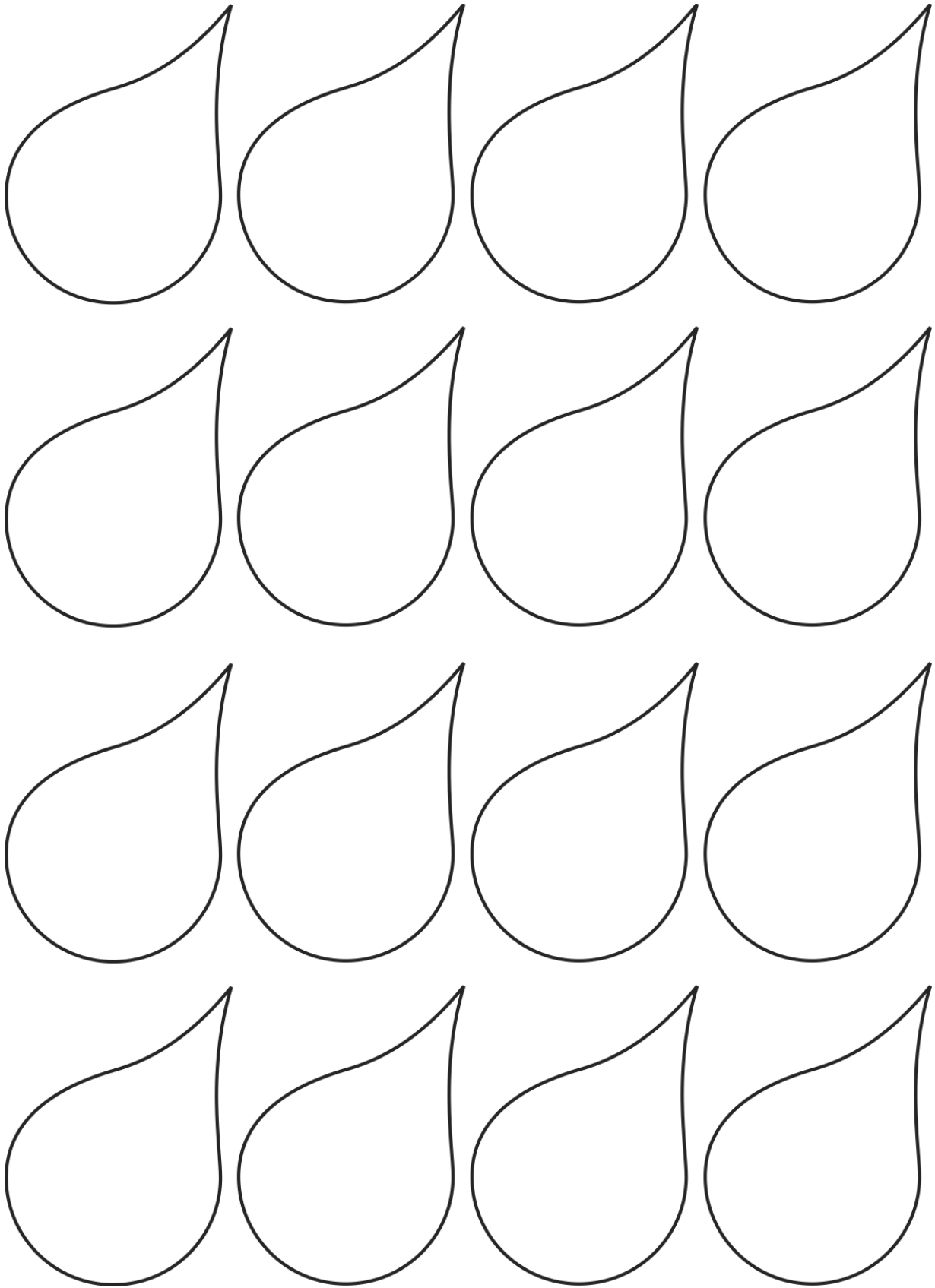
SHAKE & SPILL

Materials:
- Plastic cup
- Counters
- Deck of cards without face cards

Instructions:
1. Player A picks a card and does not show the other player the number
2. Player A puts that number of counters in the cup.
3. Player B (students) shakes and spills the counters onto the table.
4. Player B has to count number of counters.
5. Player A then reveals the card.

What this is good for:
- Counting carefully especially knowing that the last number said tells "how many" in the whole collection.

C1, C2, C3, C4, C5, C8

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"BUILDING" NUMBER SENSE

Materials
- Game card
- Lego or snap cubes
- Dice

Instructions:
1. Choose a square on the placemat.
2. Say the number
3. Use blocks to build a tower on that number on the placement

Challenge:
- Roll one die.
- Say the number and find it on the placemat.
- Use blocks to build a tower on that number on the placement

What this is good for:
- Careful counting including using counting as a strategy to solve problems.

C1, C2, C3, C4, C8

"Building" Number Sense

1	6	2
5	4	3
2	1	4

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CLOTHES PIN NUMBER MATCHING

Materials:
- Game card
- Clothes pins with numbers 1-10

Instructions:
1. Players need to count the dots and match with the corresponding number clip

What this is good for:
- Selects counting as a strategy to solve problems, without prompting

C1, C2, C3, C4, C8

Clothes Pin
Number
Match Game

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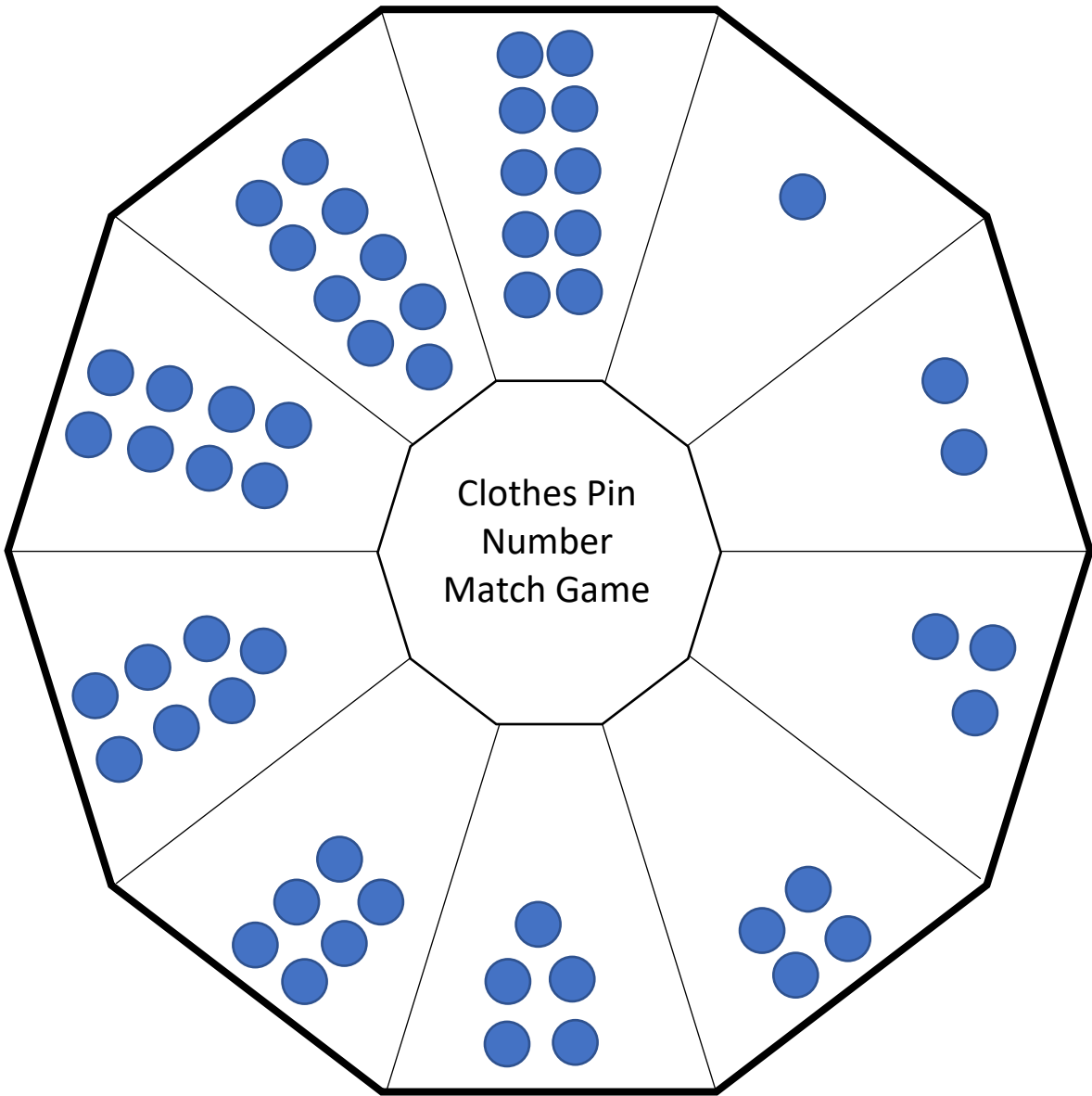
COUNTING LINKS

Materials:
- Paper clips
- Laminated tickets

Instructions:
1. Choose a ticket
2. Attach the appropriate number of clips to the corresponding ticket.

What this is good for:
- Careful counting including using counting as a strategy to solve problems, without prompting.

C1, C2, C3, C4, C8

1 2 3 4 5

6 7 8 9 10

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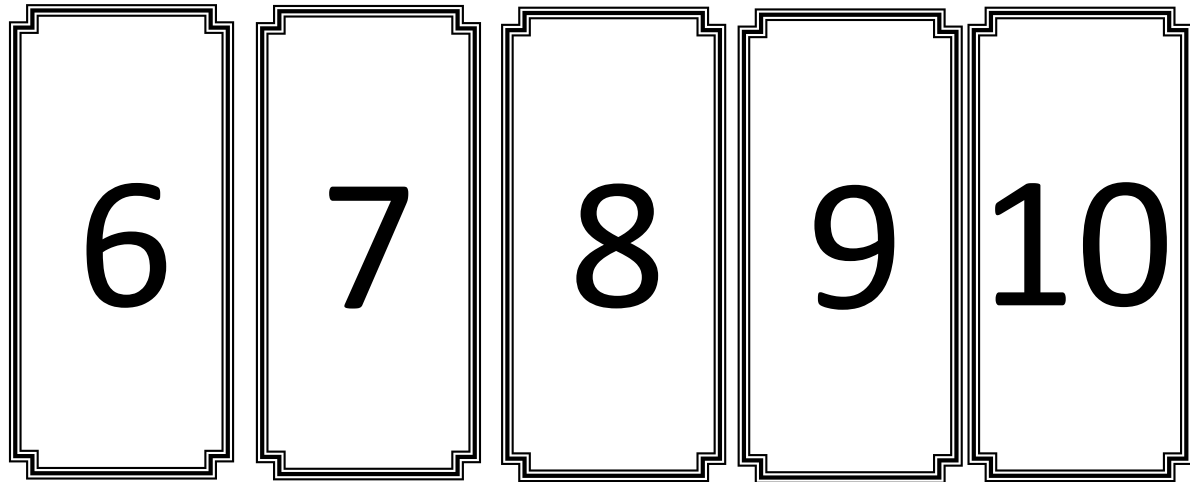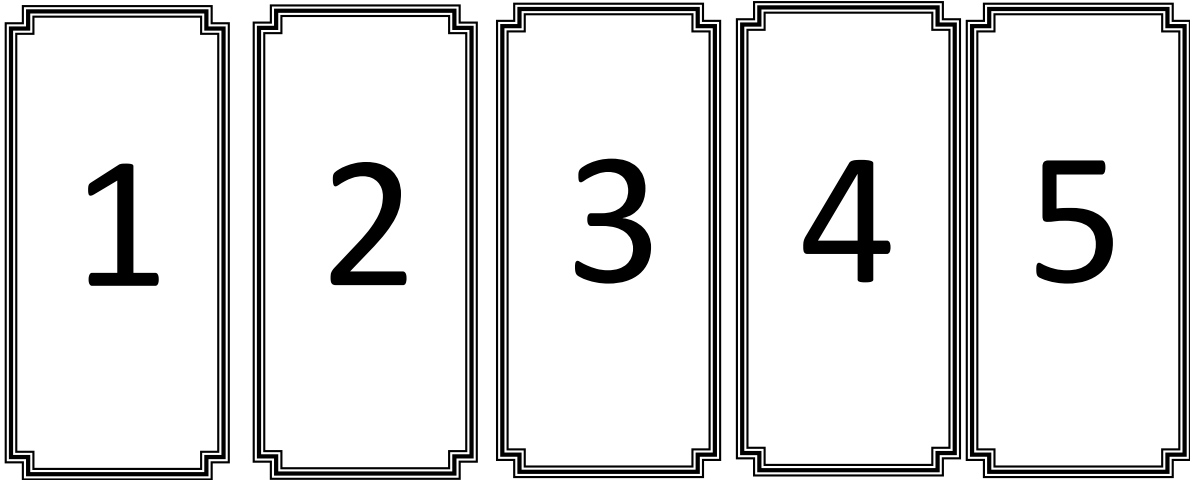
ICE CREAM MATH

Materials:
- Ice cream scoops
- Ice cream cone with numbers to 10

Instructions:
1. Choose an ice-cream cone.
2. Count out scoops and match to number on the cone.

What this is good for:
- Counts each object one at a time
- Knows the number tells "how many" in a collection
- Names and interprets numerals to 10

C1 C2 C3 C4 C8

1 2 3

4 5 6

7 8 9 10

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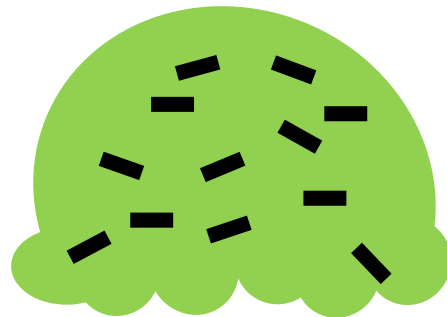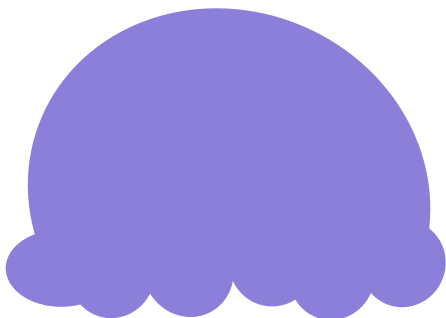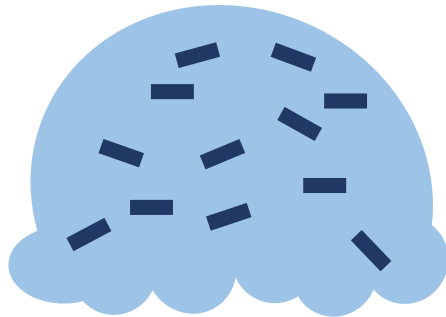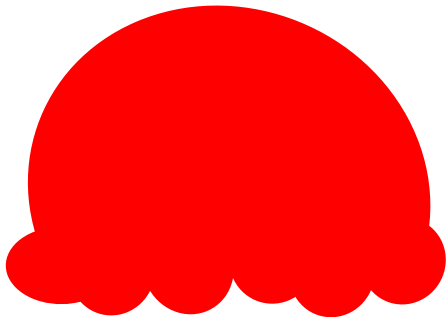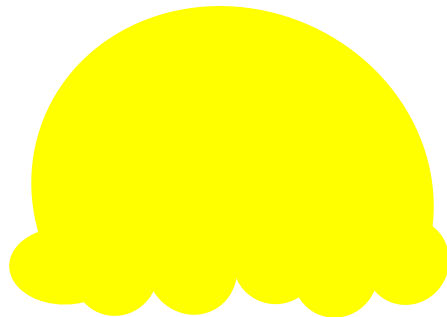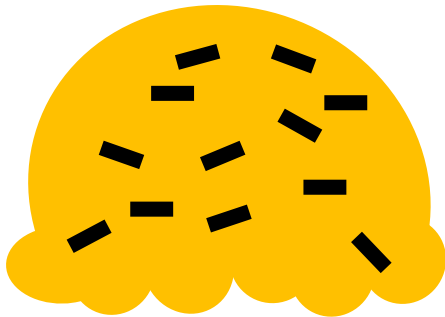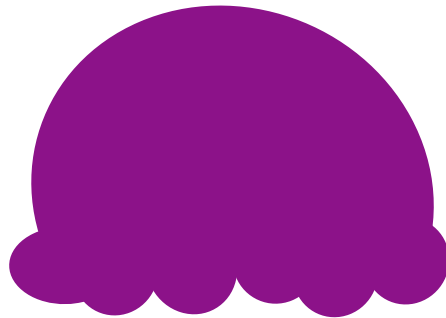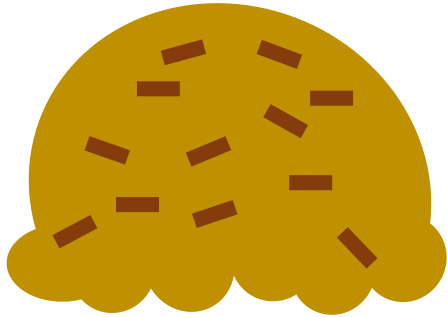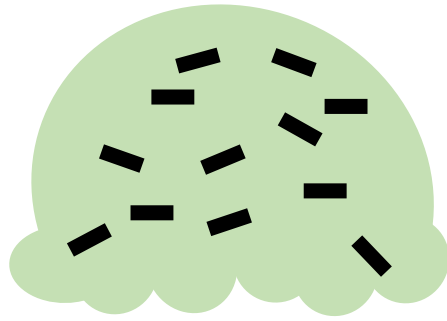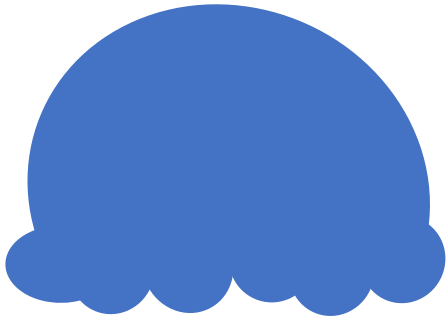
MEMORY MATCH UP

Materials:
- Cards with numerals (1-10)
- Cards with dots

Instructions:
1. Put cards, face up, in four rows of five.
2. Match number symbols to the correct quantity

Challenge
- Shuffle the cards and place the cards face down.
- Take turns to turn over two cards at a time.
- If they match, you keep them.

What this is good for:
- Knows the order in which the objects are counted doesn't affect how many there are

C1, C2, C3, C4, C8

1	2	3
4	5	6
7	8	9

10

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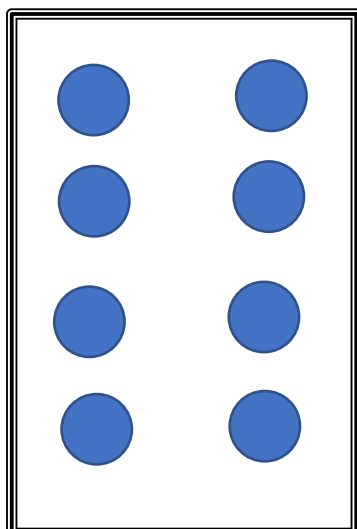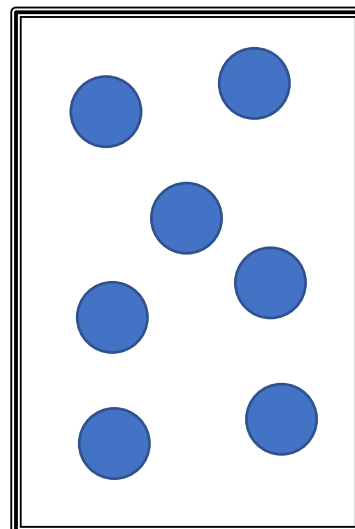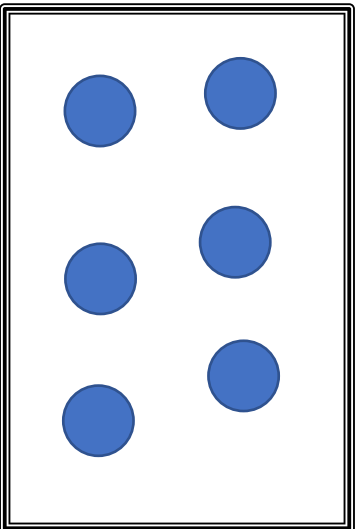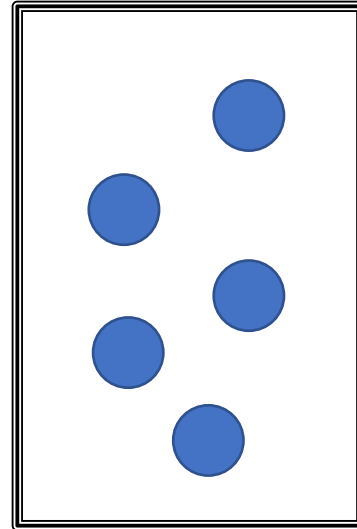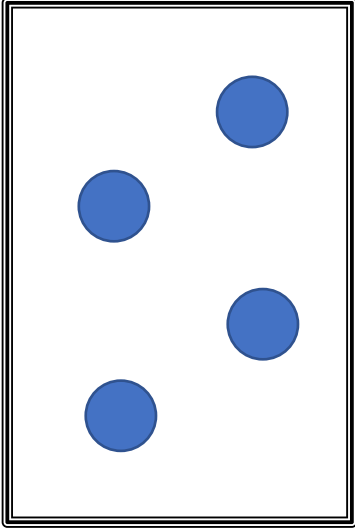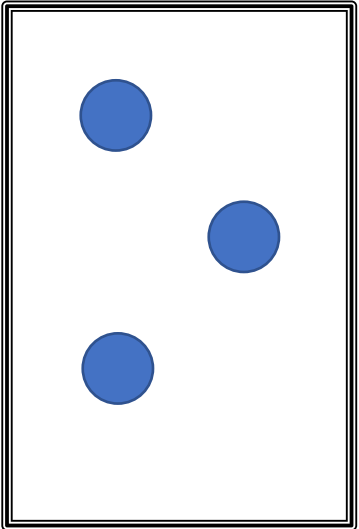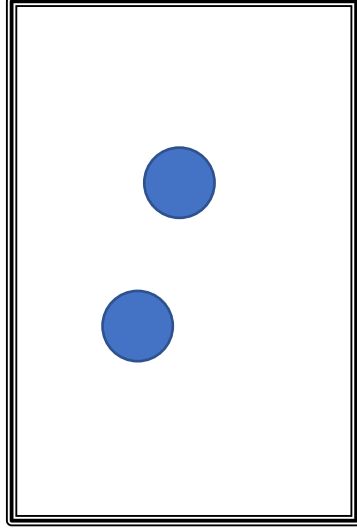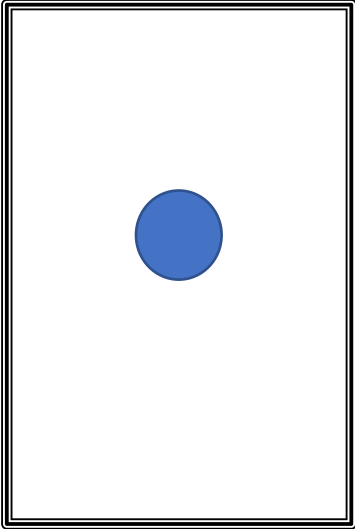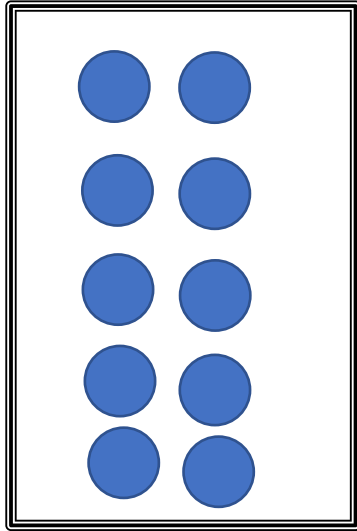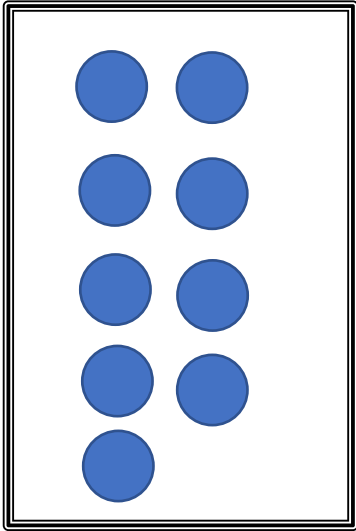
SEED COUNTING

Materials
- Game card (watermelon slice)
- Buttons/Counters to act as seeds
- Cards with numerals 1-10

Instructions:
1. Pick a card
2. Use watermelon slice and count out that many buttons (seeds) to add the slice
3. Clear off the watermelon slice.
4. Continue until you have done all the cards 1-10

What this is good for:
- Careful counting including using counting as a strategy to solve problems.

C1, C2, C3, C4, C8

1	2	3
4	5	6
7	8	9

10

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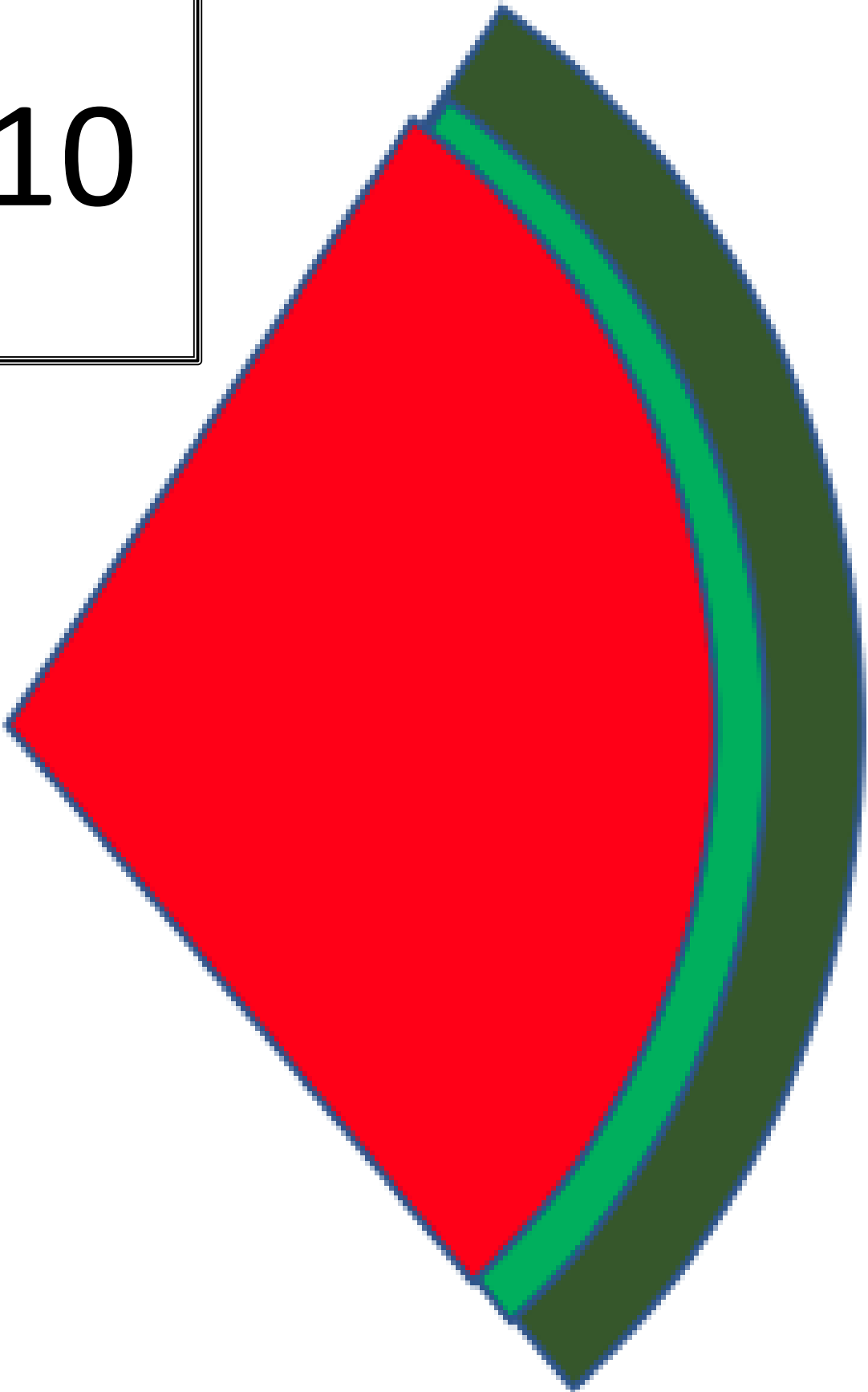
TIC-TAC-TEEN

Materials:
- Ten frame cards
- Game board
- Optional: Counters (two different colours)

Instructions:
1. Player A chooses a ten-frame card and places in on the game board in the dotted box. Decide what number between 10 and 20 has been created.
2. Player A looks for that number on the game board and place their counter on it or puts an O on it
3. Player B takes a turn and puts their counter or an X on the number they get.
4. First player to get three in a row, wins.

What this is good for:
- Getting students to learn about the teens.

C6
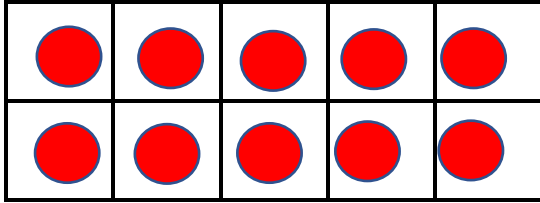
10	11	12	13	14
13	14	15	16	17
14	15	16	17	18
15	16	17	18	19
16	17	18	19	20

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FORWARDS OR BACKWARDS

Materials:
- Game board
- Two-colour counter

Instructions:
1. Flip a counter so that it lands on the game board. If necessary, move the counter so that it covers the nearest square.
2. If the counter lands with yellow facing up, count forward aloud from that number until you reach 31.
3. If the counter lands with red facing up, count backward aloud from that number until you reach 1.

What this is good for:
- Counting by rote forwards and backwards to and from 31.

C7, C9, C10

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				

M @ 🏠

RACE TO 31

Materials:
- Game board
- One die
- Dry Erase markers

Instructions:
5. Player A rolls the die and moves the correct number of spaces while saying aloud the numbers on the game board (e.g. a 4 is rolled, the player says "1, 2, 3, 4")
6. Player B takes a turn
7. Player A rolls the die another time and continues counting aloud from where he/she left off e.g., a 3 is rolled, the player says "5, 6, 7")
8. Player B takes a turn.
9. The first player to 31, wins

Challenge:
- Start at 31 and count backwards

What this is good for:
- Counting to 31

C7

Race to 31

WINNER																																START
31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1		
31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1		

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NUMBER PUZZLES 1-10

Materials:
- Set of 40 puzzle pieces

Instructions:
1. Assemble each 4-piece mini puzzle for each number 1-10

What this is good for:
- Names and interprets numerals to 10
- Connects various representations of numbers

C8

1

one

three

3

four

4

5

five

six

6

seven

7

8

eight

9

nine

ten

10

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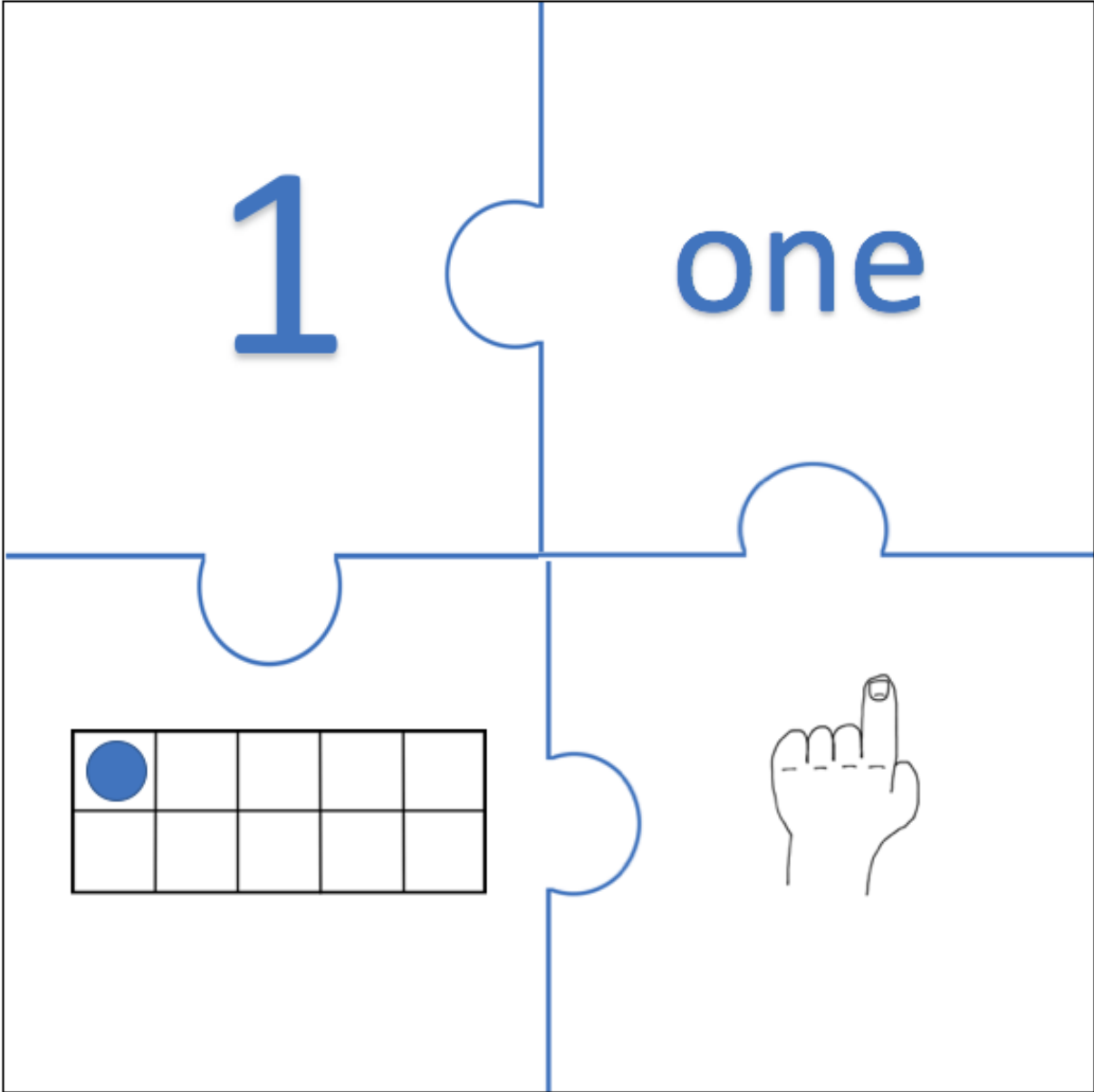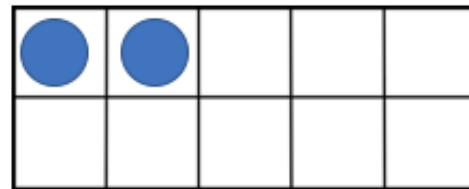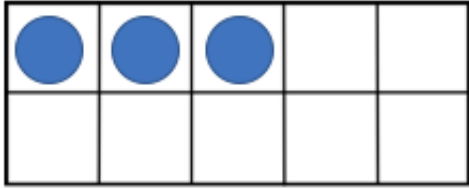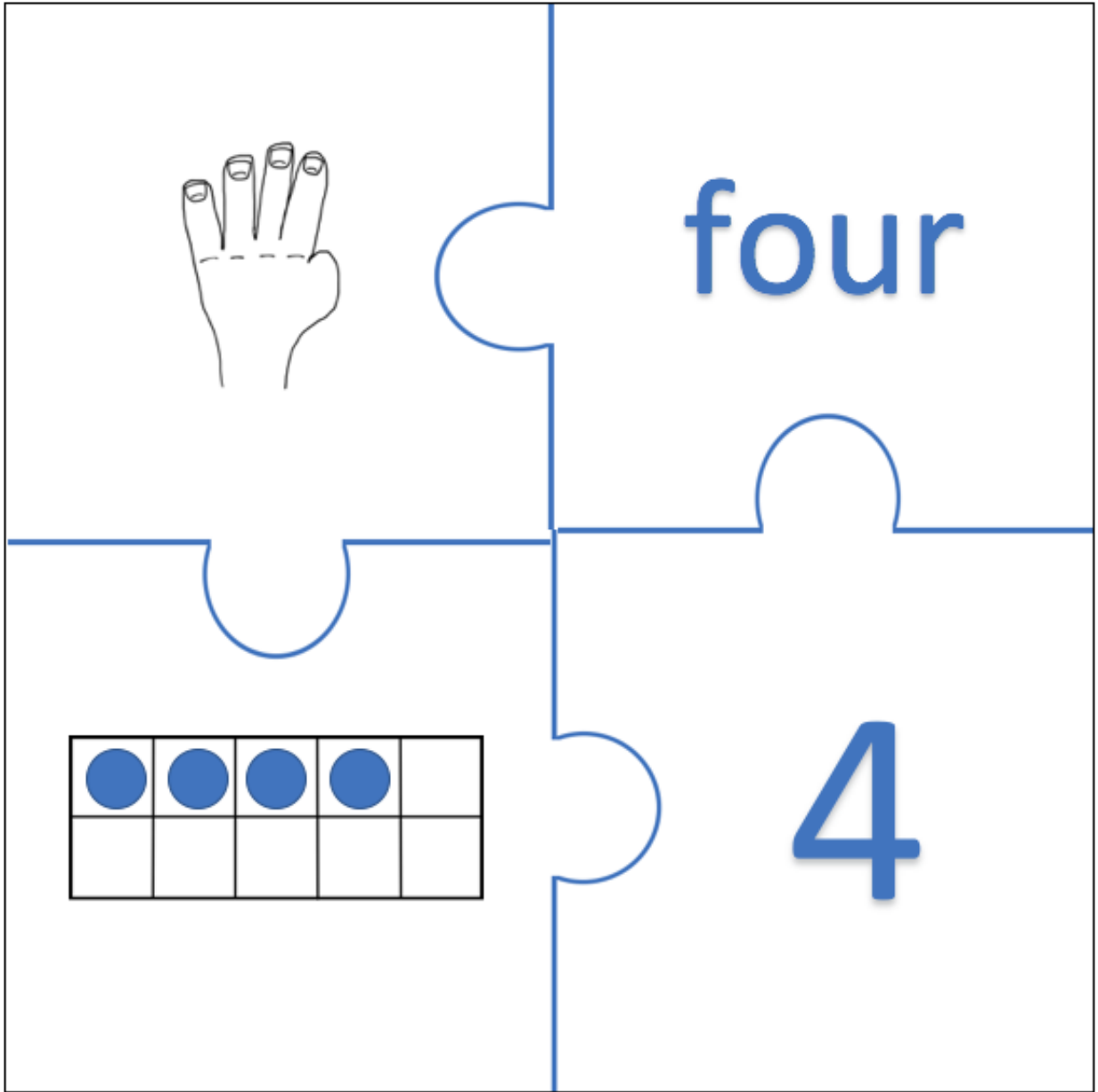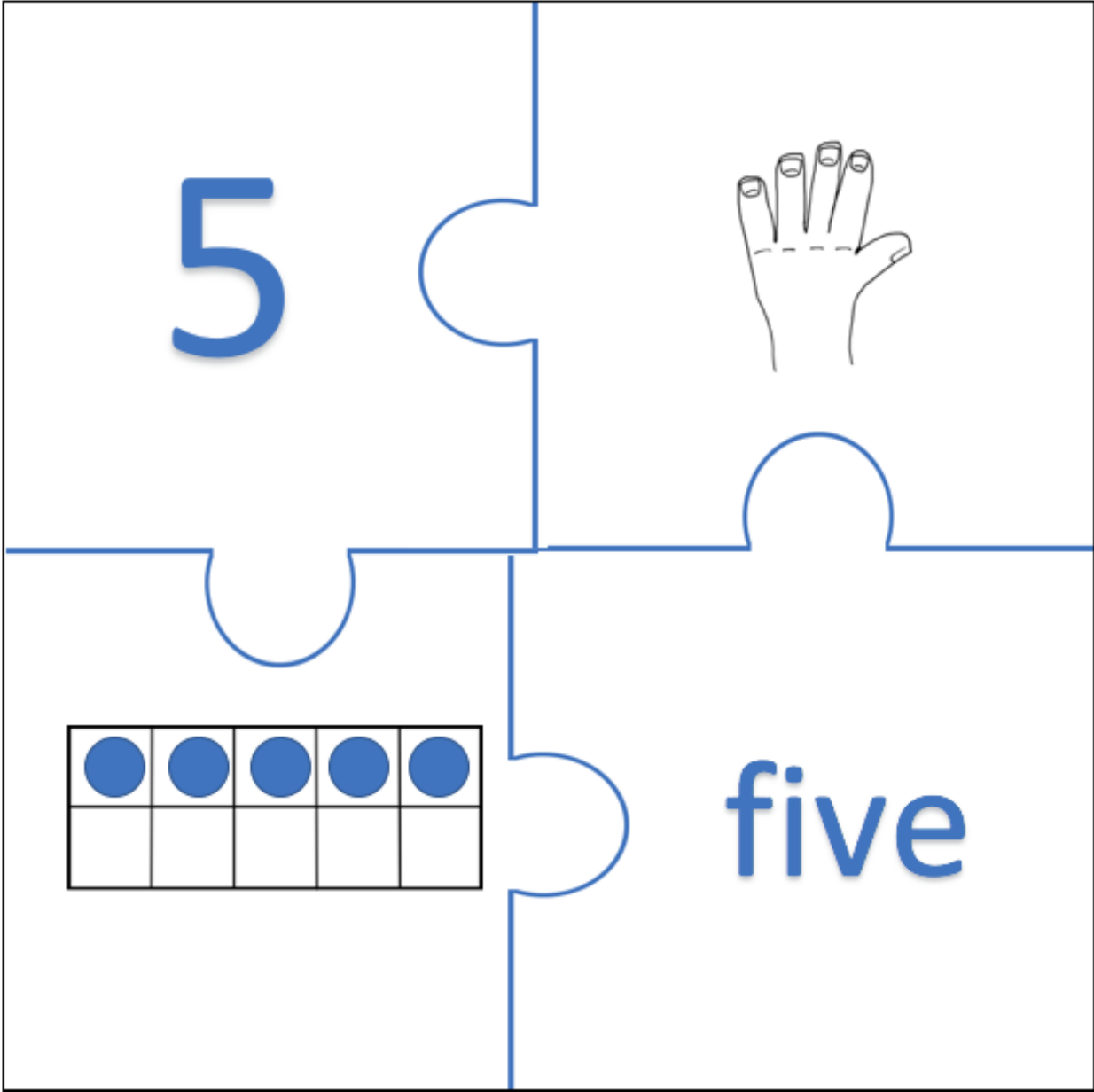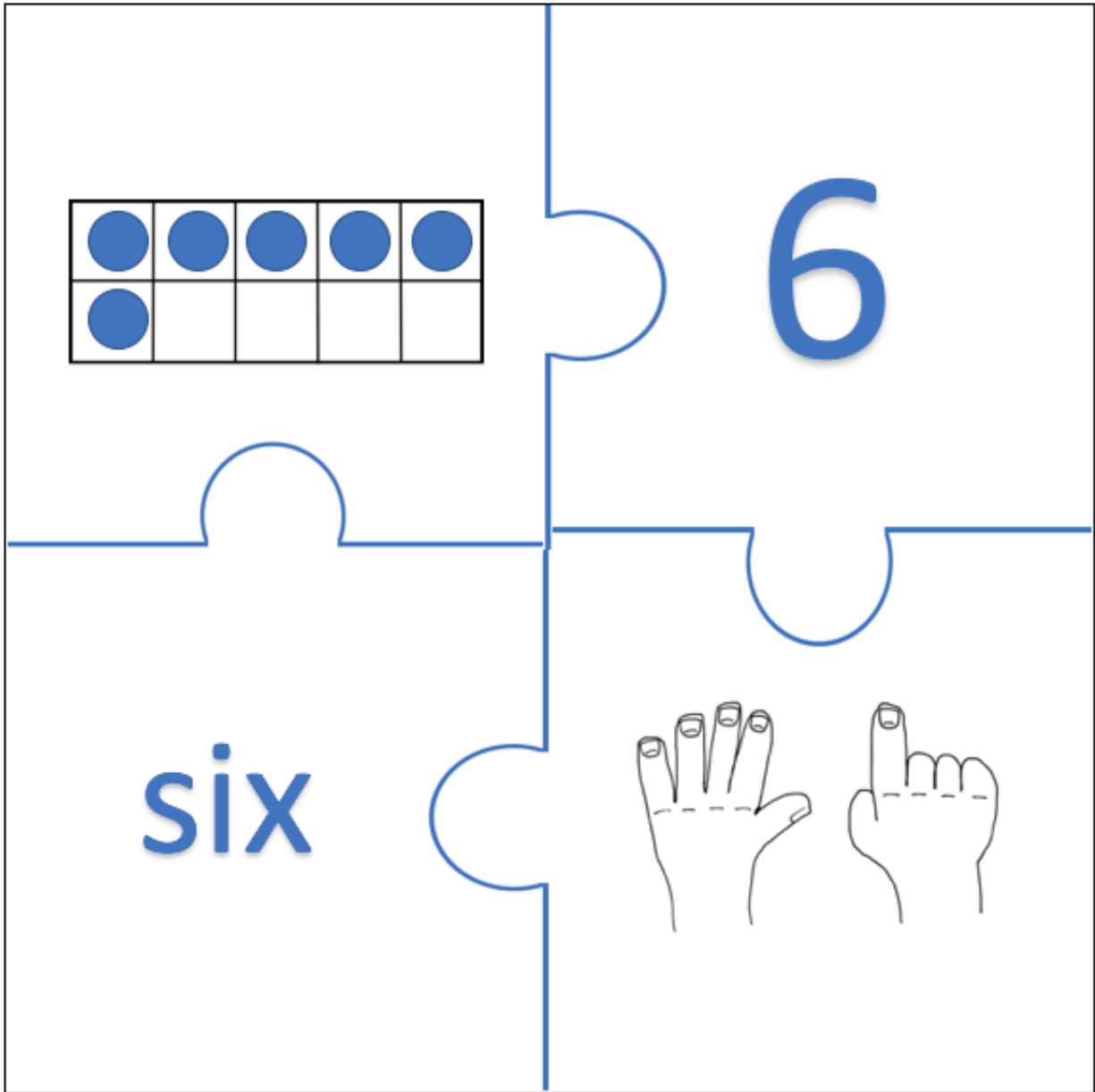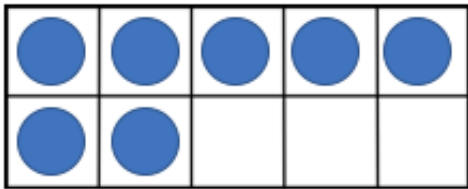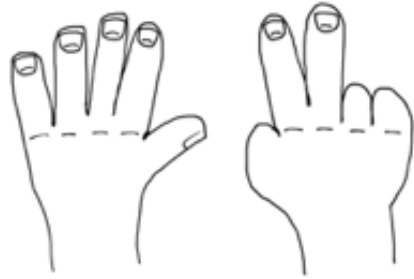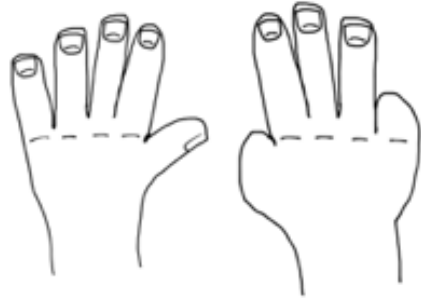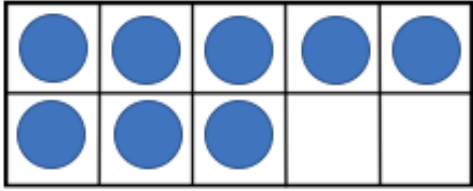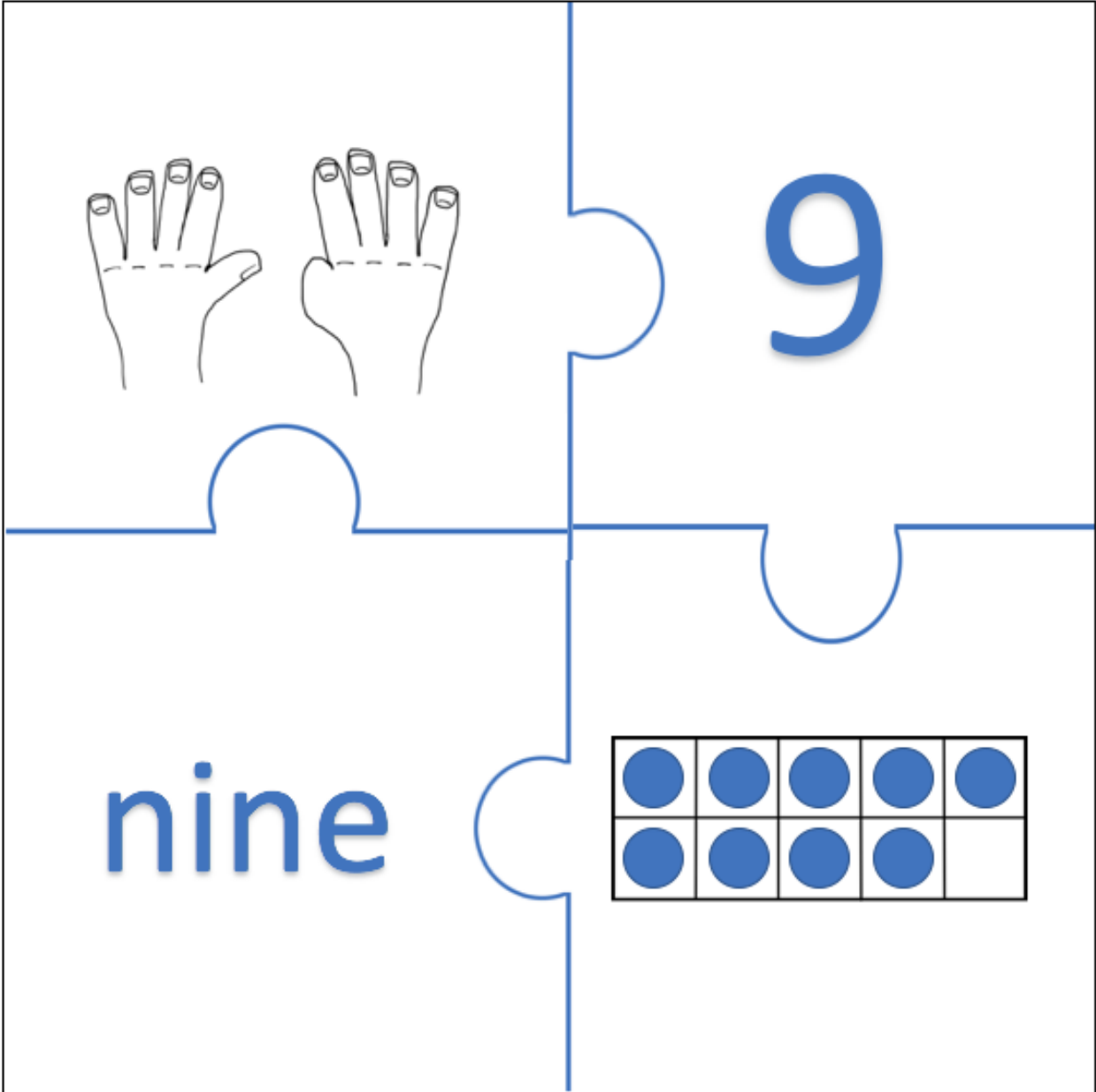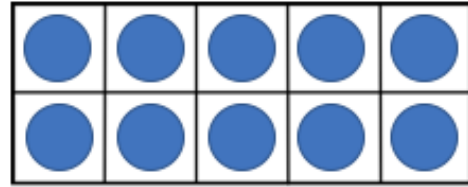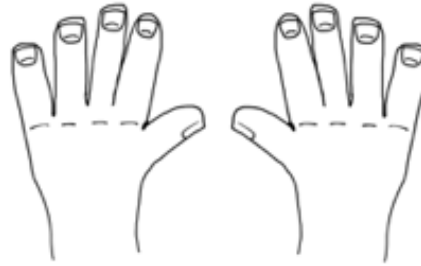
SECRET MESSAGE

Materials:

- 31 numbered cards

Instructions:

1. Place cards randomly on a table with numbers facing up.
2. Arrange in reverse order from 31 down to 1.
3. Turn the cards over to reveal the secret message.

What this is good for:

- Counting backwards from 31

C9 C10

Instructions: Photocopy double-sided onto card stock or darkly coloured paper.

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				

Instructions: Photocopy double-sided onto card stock or darkly coloured paper.

m	__	3	1	!
k	__	f	r	o
t	__	b	a	c
__	c	o	u	n
n	__	n	o	w
o	u	__	c	a
				y

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DROP AND CREATE

Materials:
- Game board
- Counter
- Base 10 blocks

Instructions:
1. Drop your counter on the number grid. If necessary, move it so it covers one number.
2. Use the base 10 blocks to create this number.

What this is good for:
- Naming and interpreting numerals to 31

C9

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				

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HUNDREDS CHART PUZZLE

Materials:

- Hundreds chart cut into pieces

Instructions:

1. Put the pieces back together to recreate the hundreds chart

What this is good for:

- Knowing the numbers up to one hundred

C11

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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OH NO 99!

Materials:
- Pack of cards

Instructions:
- See enclosed rules. Original game courtesy of Marilyn Burns.

What this is good for:
- Counting up to 100

C12

Materials Needed

A deck of playing cards with the jokers removed.

Card Values and Operations

Aces: Add 1

Jacks: Subtract 10

Queens: Wild cards that can represent any other card in the deck

Kings: Add zero

All others (2 to 10):   Add their face value

Directions for Playing the Game

1. One player shuffles the cards and deals four cards to each player. The undealt cards remain in a stack, face down.
2. Players take turns playing one card at a time, adding or subtracting the value of their card to or from their jointly accumulating score.
3. Each time a player plays a card, she or he must replace it with the top card from the face-down deck.
4. Play continues until one player forces another to go over the score of 99.

M @ 🏠

UP AND DOWN TO 120

Materials:
- Two dice
- Game cards

Instructions:
1. Throw 2 dice and add these to determine the start number.
2. Players take turns to turn over one card and follow the instructions. E.g. if the start number is 4 and Player A turns over 'Add three 10s', then that player would count three tens from 4 to get to 34. If Player B then turns over 'Add two 5s', they would count two 5s on from 34 to get to 44.
3. The player who takes the score to 120 or more wins.

What this is good for:
- Skip counting by 2s, 5s, and 10s from any number

C13

Add three 2s	Add three 2s	Add three 2s
Add five 2s	Add five 2s	Add five 2s
Add three 5s	Add three 5s	Add three 5s
Add four 5s	Add four 5s	Add four 5s
Add three 10s	Add three 10s	Add three 10s
Add two 10s	Add two 10s	Add two 10s
Subtract 2	Subtract 2	Subtract 2
Subtract three 2s	Subtract three 2s	Subtract three 2s
Subtract 5	Subtract two 5s	Subtract three 5s
Subtract 5	Subtract two 10s	Add 0

M @ 🏠

COUNTING ON YOU

Materials:
- Game cards

Instructions:
1. Separate cards into two piles, one with numbers and the other with instructions. Make sure cards are face down.
2. Turn over a number card and an instruction card.
3. Follow the instructions to count on from the given number.
4. Repeat!

What this is good for:
- Counting up to 200

C14

96	103
142	113
159	187
129	178

Count up the next 3 numbers	Count up the next 4 numbers
Count up the next 5 numbers	Count up the next 6 numbers
Count up the next 7 numbers	Count up the next 8 numbers
Count up the next 9 numbers	Count up the next 10 numbers

M @ 🏠
SPIN-A-RAMA

Materials:
- Spinner
- Game board
- Counters

Instructions:
1. Player A starts with their counter on 95.
2. Spin the spinner and move according to the instructions.
3. Count aloud as you move.
4. Player B takes a turn.
5. First player to 200 wins.

What this is good for:
- Counting up to 200

C14

Add 2 | Add 3
Add 5 | Add 10
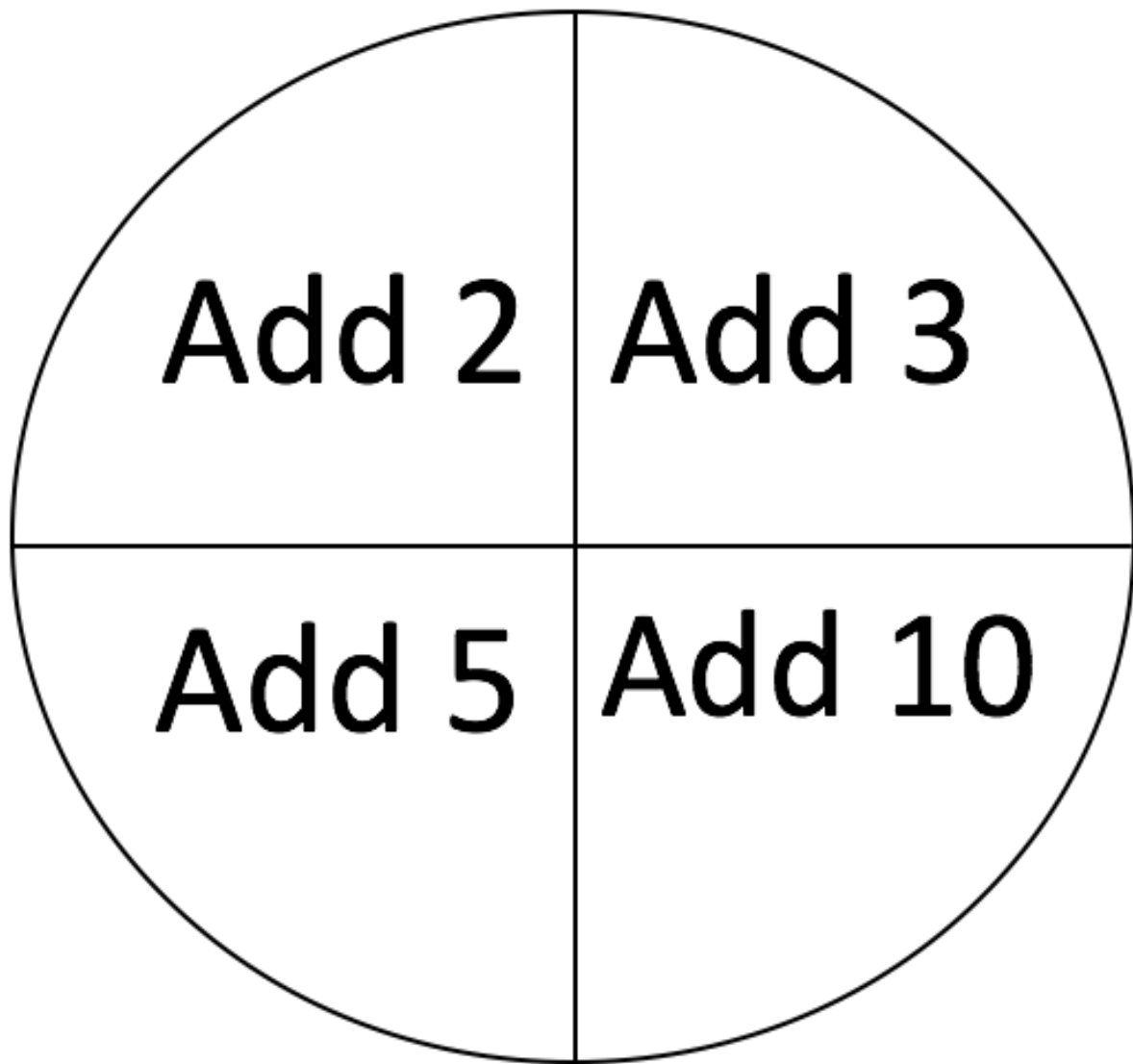
				95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170
171	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

M @ 🏠

NUMBER SEARCH: THOUSANDS

Materials:
- Number search card.

Instructions:
1. Find a set of three numbers in a row (horizontal, vertical, diagonal) that count by ones.
2. Find all six sets
3. Create your own puzzle using the blank grid and share this with someone

What this is good for:
- Counting forwards and backwards by ones from any number.

C15

Number Search

Find six sets of three-in-a row (horizontal, vertical, diagonal) that count by ones.

3000	3001	4001	4000	3999
2099	1098	1100	3099	1160
2098	1099	1998	3098	1159
1098	2000	1999	1998	1158
2998	2999	3000	1159	1001
1198	1199	1200	1100	1000

Number Search

Create your own number search with six sets of three-in-a row (horizontal, vertical, diagonal) that count by ones.

M@ 🏠

NUMBER SEARCH: COUNTING BY TENS

Materials:

- Number search card.

Instructions:

1. Find a set of three numbers in a row (horizontal, vertical, diagonal) that count by tens.
2. Find all six sets
3. Create your own puzzle using the blank grid and share this with someone

What this is good for:

- Counting forwards and backwards by tens from any number.

C16

Number Search

Find six sets of three-in-a row (horizontal, vertical, diagonal) that count by tens.

23	17	19	7	6
47	37	27	43	102
28	29	33	53	92
29	23	43	63	82
30	99	89	79	59
41	51	61	59	49

Number Search

Create your own number search with six sets of three-in-a row (horizontal, vertical, diagonal) that count by tens

M @ 🏠

SKIP COUNT TO 100

Materials:

- Deck of cards Ace to 10 (face cards not needed)
- 100 chart
- 2 Dry Erase markers

Instructions:

1. Players agree to skip count by 2s, 5s or 10s
2. Each Player A chooses a card and uses that number as the starting point.
3. Each Player must then skip count to 100 (or close to 100)
4. If the player says all numbers correctly and in the correct order, they get a point
5. Player B takes a turn.
6. First player to 5 points, wins.

Challenge:

- Players choose two cards, one is the starting number and the other is the number to skip count by.

What this good for:

- Skip counting by 2s, 5s and 10s from any number

C16

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

M @ 🏠

CONCENTRATION: TEN THOUSANDS

Materials:
- Complete set of 32 cards: 16 cards of colour A and 16 cards of colour B (print these two pages on two different coloured papers).

Instructions:
1. Game begins with all cards lying facing up on a table.
2. Player A chooses one card. If they have 2 sequential numbers (e.g. 10 999 and 11 000), they keep the cards. If the cards are not sequential, they are returned to the table.
3. Player B takes a turn
4. Players alternate turns until all cards are gone. Player with the most cards at the end wins.

Challenge:
- Place the cards face down on the table.

What this is good for:
- Counting up to, over and through hundreds of thousands.

C17

10 099	40 999
10 999	49 099
19 999	49 999
19 099	20 099
19 909	20 999
19 999	20 999
9 999	29 099
40 999	29 909

10 100	41 000
11 000	49 100
19 000	50 000
19 100	20 100
19 910	21 000
20 000	21 000
10 000	29 100
41 000	29 910

M @ 🏠

CAN YOU COUNT ON?

Materials:
- Game cards
- Tenths Chart for checking

Instructions:
1. Begin with all number cards facing down.
2. On their turn, the player flips over 2 cards and must accurately count from the lower number up to the higher number, saying the numbers correctly (e.g. 4.6 is "four and six tenths").
3. If they are successful, they get a point.
4. The first player to 10 points wins.

What this is good for:
- Counting by tenths.

C18

Can You Count On? Decimal cards

Cut these out.

3.4	5.6	1.3	0.7	2.2
0.6	0.9	7.6	8.6	4.7
8.5	5.5	6.9	9.1	9.9
0.1	7.3	3.8	5.8	3.5
7.9	5.9	2.0	8.6	1.9

Can you count on? Tenths Chart

0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0
3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0
4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0
5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6.0
6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7.0
7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8.0
8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	9.0
9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	10.0

M @ 🏠

CONNECT FOUR: TENTHS

Materials:
- Game Board
- Dry Erase Marker (2 colours)

Instructions:
1. Player A fills in any available box on the game card with the correct number and says the number aloud (e.g., "3 and 6 tenths")
2. Player B takes a turn
3. The first player with four in a row wins!

What this is good for:
- Counting by tenths

C18

Connect Four - Tenths

Take turns with your partner to fill in a box on the sheet. You must say the number properly (e.g. 5.6 is "5 and 6 tenths"). The first person to get 4 correct answers in a row wins.

0.1	0.2								
				1.5					2
		2.3					2.8		
			3.4						
	4.2							4.9	
					5.6				
6.1							6.8		
	7.2								8
			8.4					8.9	
						9.7			

M@ 🏠

NUMBER SEARCH: TENTHS

Materials:

- Number search card.

Instructions:

1. Find a set of three numbers in a row (horizontal, vertical, diagonal) that count by tenths.
2. Find all six sets
3. Create your own puzzle using the blank grid and share this with someone

What this is good for:

Counting forwards and backwards by tenths from any number.

C18

Number Search

Find six sets of three-in-a row (horizontal, vertical, diagonal) that count by tenths.

1.4	1.5	4.0	3.9	0.6
2.1	1.10	1.6	0.7	0.5
2	1.9	1.8	1.7	0.4
1.9	1.8	2.8	3.8	4
2.9	5.2	3.7	3.9	4.1
2.7	3.6	3.8	3.10	4.02

Number Search

Create your own number search with six sets of three-in-a row (horizontal, vertical, diagonal) that count by tenths .

M @ 🏠
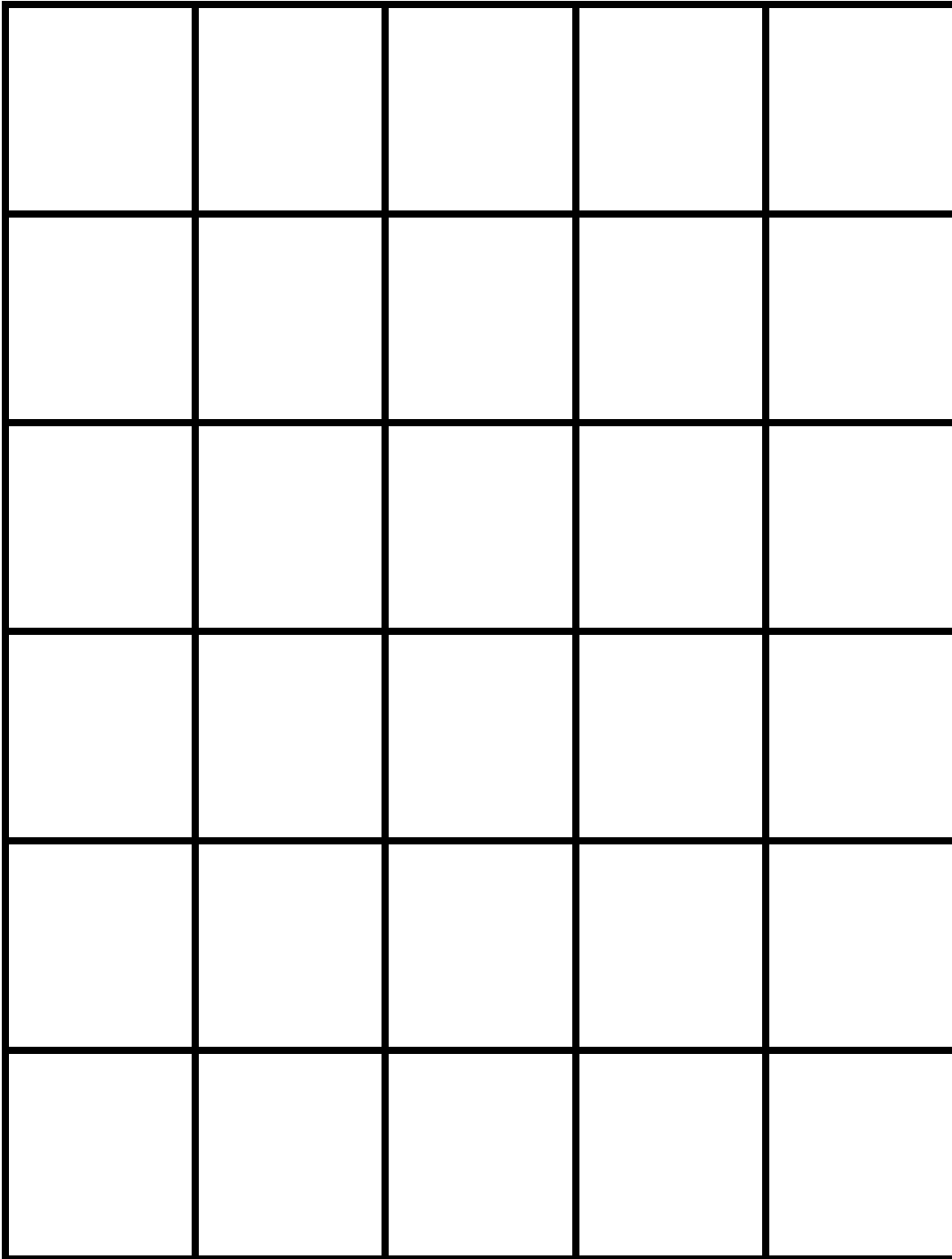
RACE TO TEN

Materials:
- 2 dice
- 2 game boards
- Dry-erase marker

Instructions:
1. Player A rolls both dice and uses the number to represent tenths. Record the number on the score card.
2. Player A colours the tenths strip with the number of tenths rolled.
3. Player B takes a turn and records on their gameboard.

What this is good for:
- Counting by tenths

C18

Counting #18 – Race to Ten

Score Card

Roll 1	Roll 2	Roll 3	Roll 4	Roll 5	Roll 6	Roll 7	Roll 8	Roll 9	Roll 10	Roll 11	Roll 12	Roll 13	Roll 14	Roll 15	Roll 16	Roll 17	Roll 18	Roll 19	Roll 20

Counting #18 – Race to Ten
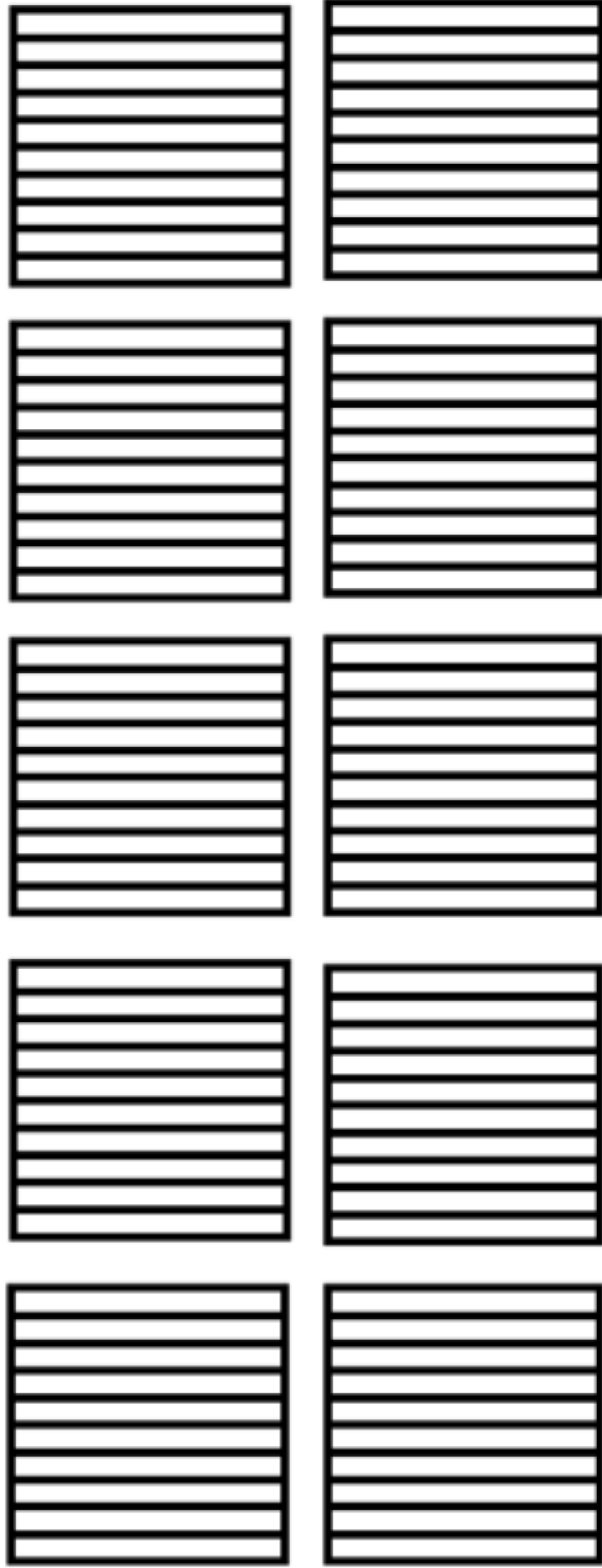
Score Card

Roll 1	Roll 2	Roll 3	Roll 4	Roll 5	Roll 6	Roll 7	Roll 8	Roll 9	Roll 10	Roll 11	Roll 12	Roll 13	Roll 14	Roll 15	Roll 16	Roll 17	Roll 18	Roll 19	Roll 20

M @ 🏠

CONCENTRATION: HUNDRED THOUSANDS

Materials:
- Complete set of 32 cards: 16 cards of colour A and 16 cards of colour B (print these two pages on two different coloured papers).

Instructions:
1. Game begins with all cards lying face up on a table.
2. Player A chooses one card. If they have 2 sequential numbers (e.g. 109 999 and 110 000), they keep the cards. If the cards are not sequential, they are returned to the table.
3. Player B takes a turn
4. Players alternate turns until all cards are gone. Player with the most cards at the end wins.

Challenge:
- Place the cards face down on the table.

What this is good for:
- Counting up to, over and through hundreds of thousands.

C19

100 099	490 999
109 999	499 099
190 999	499 999
199 099	200 099
199 909	209 999
199 999	290 999
99 999	299 099
409 999	299 909

100 100	491 000
110 000	499 100
191 000	500 000
199 100	200 100
199 910	210 000
200 000	291 000
100 000	299 100
410 000	299 910

M @ 🏠

CONNECT FOUR: HUNDREDTHS

Materials:
- Game Board
- Dry Erase Marker (two colours)

Instructions:
1. Player A fills in any available box on the game card with the correct number and says the number aloud (e.g. "2 and 68 hundredths")
2. Player B takes a turn
3. The first player with four in a row wins!

What this is good for:
- Counting by hundredths

C20

Connect Four – Hundredths

Take turns with your partner to fill in a box on the sheet. You must say the number properly (e.g. 2.68 is "2 and 68 hundredths"). The first person to get 4 correct answers in a row wins.

2.41								
	2.52	2.53						
						2.68		
								2.8
	2.82		2.85					
				2.96				
							3.09	
	3.13							
						3.28		
		3.34						

M @ 🏠

NUMBER SEARCH: HUNDREDTHS

Materials:

- Number search card.

Instructions:

1. Find a set of three numbers in a row (horizontal, vertical, diagonal) that count by hundredths.
2. Find all six sets
3. Create your own puzzle using the blank grid and share this with someone

What this is good for:

Counting forwards and backwards by hundredths from any number.

C20

Number Search

Find six sets of three-in-a row (horizontal, vertical, diagonal) that count by hundredths.

1.12	1.11	1.09	1.71	1.70
1.8	1.10	2.31	2.3	1.69
1.11	1.9	1.89	1.88	1.68
3.01	3.02	2	2.1	2.2
3	2.03	2.02	2.01	3.5
2.99	5.7	0.98	0.99	1

Number Search

Create your own number search with six sets of three-in-a row (horizontal, vertical, diagonal) that count by hundredths.

M @ 🏠

CONCENTRATION: MILLIONS

Materials:

- Complete set of 32 cards: 16 cards of colour A and 16 cards of colour B (print these two pages on two different coloured papers).

Instructions:

1. Game begins with all cards lying face up on a table.
2. Player A chooses one card. If they have 2 sequential numbers (e.g. 1 000 999 and 1 001 000), they keep the cards. If the cards are not sequential, they are returned to the table.
3. Player B takes a turn
4. Players alternate turns until all cards are gone. Player with the most cards at the end wins.

Challenge:

- Place the cards face down on the table.

What this is good for:

- Counting in the millions

C21

C21 **Concentration – 1 000 000s**
Colour A

999 999	1 199 999
1 000 099	1 119 999
1 000 999	1 111 999
1 009 999	4 099 999
1 090 999	4 009 999
1 900 999	4 000 999
1 909 999	4 000 099
1 999 999	4 000 009

Colour B

1 000 000	1 200 000
1 000 100	1 120 000
1 001 000	1 112 000
1 010 000	4 100 000
1 091 000	4 010 000
1 901 000	4 001 000
1 910 000	4 000 100
2 000 000	4 000 010

M @ 🏠

NUMBER SEARCH: THOUSANDTHS

Materials:

- Number search card.

Instructions:

1. Find a set of three numbers in a row (horizontal, vertical, diagonal) that count by thousandths.
2. Find all six sets
3. Create your own puzzle using the blank grid and share this with someone

What this is good for:

Counting forwards and backwards by thousandths from any number.

C22

Number Search

Find six sets of three-in-a row (horizontal, vertical, diagonal) that count by thousandths.

5.04	1.118	1.119	1.12	2.999
5.051	5.05	5.049	1.121	3
1.009	3.998	5.051	1.222	3.1
2.021	1.1	3.999	4.01	4.1
2.02	1.2	1.001	4	4.099
2.019	1.3	3.999	3.9	4.098

Number Search

Create your own number search with six sets of three-in-a row (horizontal, vertical, diagonal) that count by thousandths.

M @ 🏠
COUNTING PURSUITS

Materials:
- Game cards
- Die
- Paper and pencil to keep score and jot thinking.

Instructions:
1. Player A rolls the die. Roll again if a 6 is shown. Otherwise, an opponent asks a question according to the number shown:
   1) Large Numbers
   2) Integers
   3) Fractions
   4) Decimals
   5) Choose your own category

   Answers are given on the reverse of the question card. If correct, Player A gets one point.
2. Player B takes a turn.
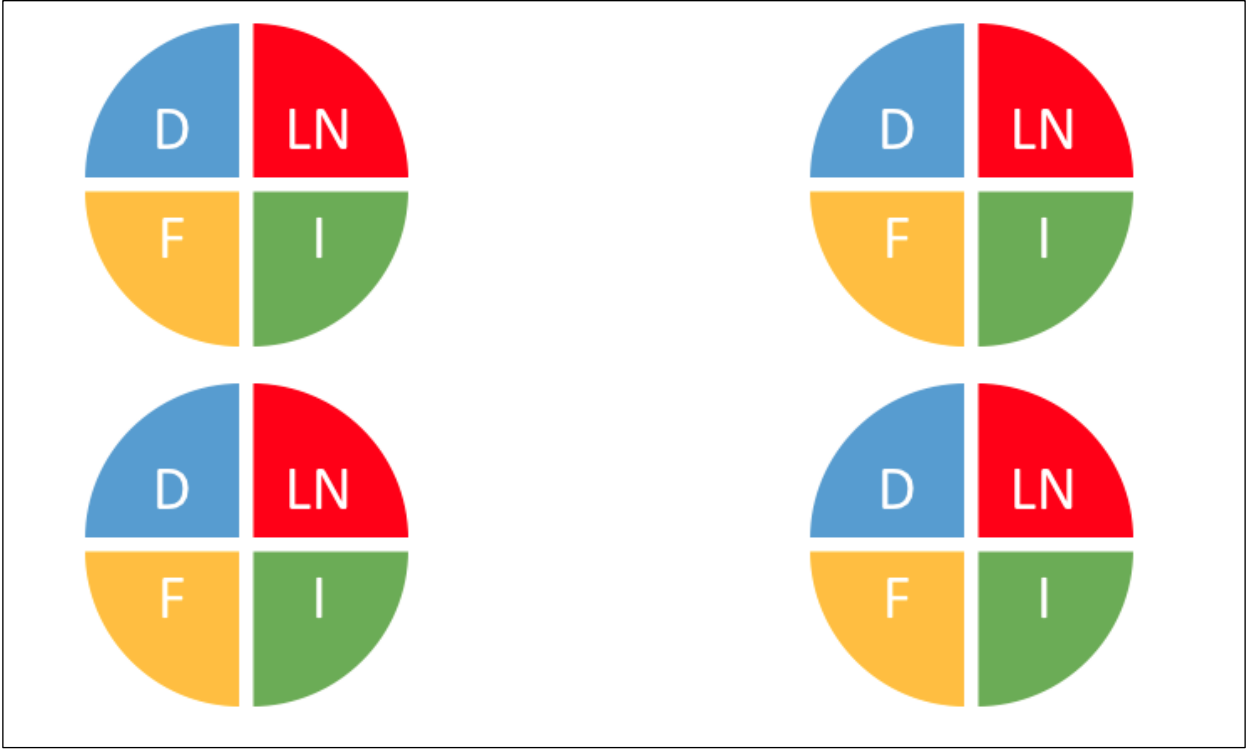3. First player to five points wins.

Variation:
To win, you must answer one question correctly from each of the four categories. The circles can be used for up to four players to keep track of what categories they have successfully answered (by covering a category with a counter when necessary.)

What this is good for:
- Skip counting by various amounts.

C23, C24, C25, C26

COUNTING PURSUITS Questions		COUNTING PURSUITS Questions
Large Numbers: Start at 999 000, go up by thousands **Integers:** Start at -1, go up by threes **Fractions:** Start at 1, go up by two-thirds **Decimals:** Start at 1 go up by six-tenths		**Large Numbers:** Start at 12 700, go up by two hundreds **Integers:** Start at -8, go up by threes **Fractions:** Start at 3, go down by two-thirds **Decimals:** Start at 9.3, go up by four-tenths
COUNTING PURSUITS Questions		COUNTING PURSUITS Questions
Large Numbers: Start at one million, go down by ten thousands **Integers:** Start at 8, go down by tens **Fractions:** Start at 5, go up by three-quarters **Decimals:** Start at 2.25, go up by three-tenths		**Large Numbers:** Start at 30 000, go down by two hundreds **Integers:** Start at 15, go down by tens **Fractions:** Start at 5, go down by three-quarters **Decimals:** Start at 2.25, go down by three-tenths
COUNTING PURSUITS Questions		COUNTING PURSUITS Questions
Large Numbers: Start at 95 000, go up by three thousands **Integers:** Start at -14, go up by eights **Fractions:** Start at 6, go up by three-fifths **Decimals:** Start at 9.2, go up by five-tenths		**Large Numbers:** Start at 80 000, go down by two hundreds **Integers:** Start at 19, go down by tens **Fractions:** Start at 6, go down by three-fifths **Decimals:** Start at 9.7, go down by four-tenths
COUNTING PURSUITS Questions		COUNTING PURSUITS Questions
Large Numbers: Start at 940 000, go up by twenty thousands **Integers:** Start at -18, go up by nines **Fractions:** Start at 7, go up by five-sevenths **Decimals:** Start at 5.75. go up by two-tenths		**Large Numbers:** Start at one million, go down by fifty thousands **Integers:** Start at 18, go down by twelves **Fractions:** Start at 7, go down by five-sevenths **Decimals:** Start at 5.75, go down by three-tenths

COUNTING PURSUITS Answers **Large Numbers:** 12 900, 13 100, 13 300 **Integers:** -5, -2, 1 **Fractions:** $2\frac{1}{3}, 1\frac{2}{3}, 1$ **Decimals:** 9.7, 10.1, 10.5		COUNTING PURSUITS Answers **Large Numbers:** 1000 000, 1 001 000, 1 002 000 **Integers:** 2, 5, 8 **Fractions:** $1\frac{2}{3}, 2\frac{1}{3}, 3$ **Decimals:** 1.6, 2.2, 2.8	
COUNTING PURSUITS Answers **Large Numbers:** 29 800, 29 600, 29 400 **Integers:** 5, -5, -15 **Fractions:** $4\frac{1}{4}, 3\frac{1}{2}, 2\frac{3}{4}$ **Decimals:** 1.95, 1.65, 1.35		COUNTING PURSUITS Answers **Large Numbers:** 990 000, 980 000, 970 000 **Integers:** -2, -12, -22 **Fractions**: $5\frac{3}{4}, 6\frac{1}{2}, 7\frac{1}{4}$ **Decimals:** 2.55, 2.85, 3.15	
COUNTING PURSUITS Answers **Large Numbers:** 79 800, 79 600, 79 400 **Integers:** 9, -1, -11 **Fractions:** $5\frac{2}{5}, 4\frac{4}{5}, 4\frac{1}{5}$ **Decimals:** 9.3, 8.9, 8.5		COUNTING PURSUITS Answers **Large Numbers:** 98 000, 101 000, 104 000 **Integers:** -6, 2, 10 **Fractions:** $6\frac{3}{5}, 7\frac{1}{5}, 7\frac{4}{5}$ **Decimals:** 9.7, 10.2, 10.7	
COUNTING PURSUITS Answers **Large Numbers:** 950 000, 900 000, 850 000 **Integers:** 6, -6, -18 **Fractions:** $6\frac{2}{7}, 5\frac{4}{7}, 4\frac{6}{7}$ **Decimals:** 5.45, 5.15, 4.85		COUNTING PURSUITS Answers **Large Numbers:** 960 000, 980 000, 1 000 000 **Integers:** -9, 0, 9 **Fractions:** $7\frac{5}{7}, 8\frac{3}{7}, 9\frac{1}{7}$ **Decimals:** 5.95, 6.15, 6.35	

COUNTING PURSUITS Questions		COUNTING PURSUITS Questions
Large Numbers: Start at 750 000. Go up by fifty thousands. **Integers:** Start at -12. Go up by sevens. **Fractions:** Start at $2\frac{2}{3}$. Go up by two-thirds. **Decimals:** Start at 3.7. Go up by fifteen-hundredths.		**Large Numbers:** Start at 750 000. Go down by fifty thousands. **Integers:** Start at 12. Go down by sevens. **Fractions:** Start at $2\frac{2}{3}$. Go down by two-thirds. **Decimals:** Start at 7.3. Go down by fifteen-hundredths.
COUNTING PURSUITS Questions		COUNTING PURSUITS Questions
Large Numbers: Start at 950 000. Go up by twenty-five thousands. **Integers:** Start at -20. Go up by nines. **Fractions:** Start at $5\frac{3}{4}$. Go up by three-quarters. **Decimals:** Start at 8.5. Go up by twenty-five hundredths.		**Large Numbers:** Start at 950 000. Go down by twenty-five thousands. **Integers:** Start at 20. Go down by nines. **Fractions:** Start at $5\frac{3}{4}$. Go down by three-quarters. **Decimals:** Start at 8.5. Go down by twenty-five hundredths.
COUNTING PURSUITS Questions		COUNTING PURSUITS Questions
Large Numbers: Start at 95 000. Go up by three thousands. **Integers:** Start at 23. Go down by tens. **Fractions:** Start at 9. Go up by three-fifths. **Decimals:** Start at 0.96. Go up by two-tenths.		**Large Numbers:** Start at 105 000. Go down by three thousands. **Integers:** Start at -23. Go up by tens. **Fractions:** Start at 9. Go down by three-fifths. **Decimals:** Start at 1.06. Go down by two-tenths.
COUNTING PURSUITS Questions		COUNTING PURSUITS Questions
Large Numbers: Start at 10 million. Go down by five-hundred thousand. **Integers:** Start at 47. Go down by twenties. **Fractions:** Start at 11. Go up by on-and-a-half. **Decimals:** Start at 0.97. Go up by two-hundredths.		**Large Numbers:** Start at nine million. Go up by five-hundred thousand. **Integers:** Start at -47. Go up by twenties. **Fractions:** Start at 11. Go down by one-and-a-half. **Decimals:** Start at 1.03. Go down by two-hundredths.

COUNTING PURSUITS Answers **Large Numbers:** 700 000, 650 000, 600 000 **Integers:** 5, -2, -9 **Fractions:** $2, 1\frac{1}{3}, \frac{2}{3}$ **Decimals:** 7.15, 7, 6.85	COUNTING PURSUITS Answers **Large Numbers:** 800 000, 850 000, 900 000 **Integers:** -5, 2, 9 **Fractions:** $3\frac{1}{3}, 4, 4\frac{2}{3}$ **Decimals:** 3.85, 4, 4.15
COUNTING PURSUITS Answers **Large Numbers:** 925 000, 900 000, 875 000 **Integers:** 11, 2, -7 **Fractions:** $5, 4\frac{1}{4}, 3\frac{1}{2}$ **Decimals:** 8.25, 8, 7.75	COUNTING PURSUITS Answers **Large Numbers:** 975 000, 1 000 000, 1 025 000 **Integers:** -11, -2, 7 **Fractions:** $6\frac{1}{2}, 7\frac{1}{4}, 8$ **Decimals:** 8.75, 9, 9.25
COUNTING PURSUITS Answers **Large Numbers:** 102 000, 99 000, 96 000 **Integers:** -13, -3, 7. **Fractions:** $8\frac{2}{5}, 7\frac{4}{5}, 7\frac{1}{5}$ **Decimals:** 0.86, 0.66, 0.46	COUNTING PURSUITS Answers **Large Numbers:** 98 000, 101 000, 104 000 **Integers:** 13, 3, -7 **Fractions:** $9\frac{3}{5}, 10\frac{1}{5}, 10\frac{4}{5}$ **Decimals:** 1.16, 1.36, 1.56
COUNTING PURSUITS Answers **Large Numbers:** 9 500 000, 10 000 000, 10 500 000 **Integers:** -27, -7, 13 **Fractions:** $9\frac{1}{2}, 8, 6\frac{1}{2}$ **Decimals:** 1.01, 0.99, 0.97	COUNTING PURSUITS Answers **Large Numbers:** 9 500 000, 9 000 000, 8 500 000 **Integers:** 27, 7, -13 **Fractions:** $12\frac{1}{2}, 14, 15\frac{1}{2}$ **Decimals:** 0.99, 1.01, 1.03

M @ 🏠

CUP AND CHIPS

Materials:
- Plastic cup
- Five chips

Instructions:
1. Player A: Put 1, 2, 3, 4, or 5 chips into the cup. Shake the cup and turn it upside down on a table. Say: "Get ready to say how many there are!"
2. Player A removes the cup to reveal the chips and then replace it after a couple of seconds.
3. Player B gives an answer, removes the cup and checks by counting. If Player B doesn't give an answer straight away, remove the cup for another two seconds before replacing it again. Keep doing this until an answer is given.

What this is good for:
- Subitising (seeing how many objects there are without actually counting)

Q1, Q2

M @ 🏠
FINGER MATCH

Materials:

- None

Instructions:

1. Both players make a fist. Player A says "Match-my-fingers" and reveals any number of fingers from 1 to 5.
2. Player B has to match the fingers that Player A shows and then say the number. Players then switch roles and repeat.

Challenge:

- Vary the ways you show a certain number. For example, the number two can be shown by a thumb and forefinger, a ring and little finger, a thumb and little finger etc.

What this is good for:

- Subitising (seeing how many objects there are without actually counting)

Q1, Q2

M @ 🏠

NUMBER MATCH 1 to 5
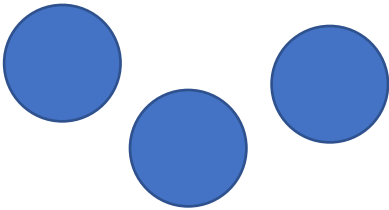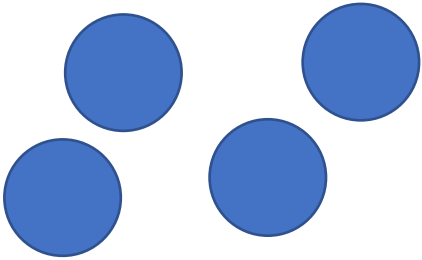
Materials:
- Game cards

Instructions:
1. Deal the cards face down in two rows of 5.
2. Player A turns two cards over. If the numeral matches the number of dots, the player keeps both cards.
3. Player B takes a turn
4. The player with the most pairs, wins.

What this is good for:
- Matching a number symbol to an actual quantity.

Q2

	1
	2
	3
	4
	5

M @ 🏠

NUMBER MATCH 1 to 10
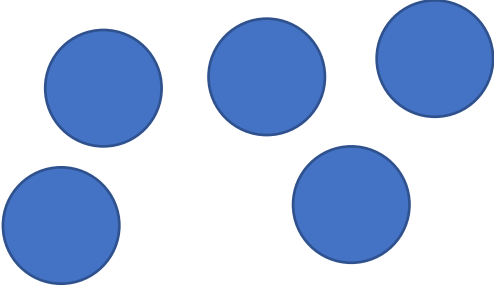
Materials:
- Game cards
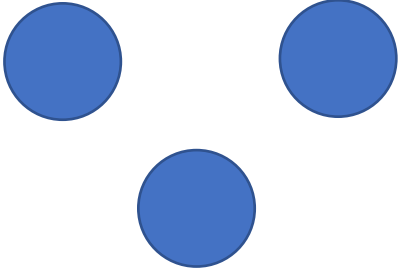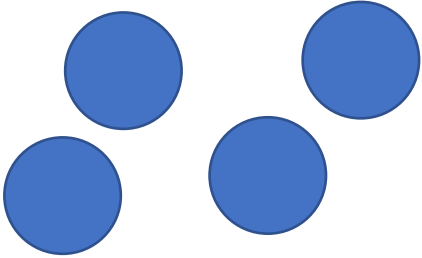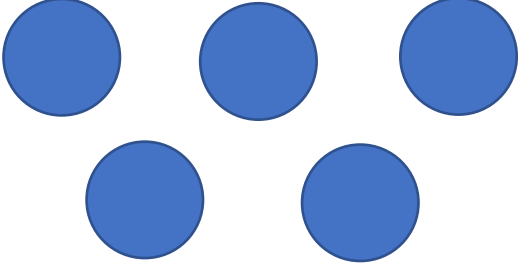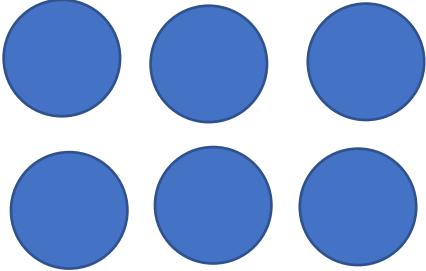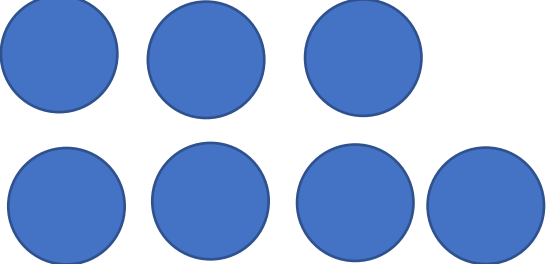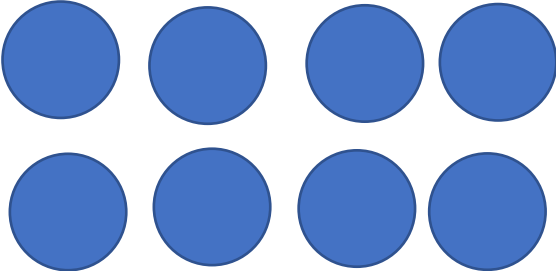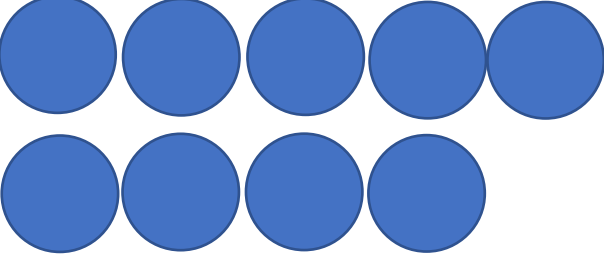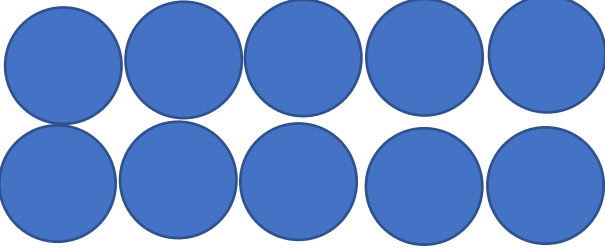
Instructions:
- Deal the cards face down in four rows of 5.
- Player A turns two cards over. If the numeral matches the number of dots, the player keeps both cards.
- Player B takes a turn
- The player with the most pairs, wins.

What this is good for:
- Matching a number symbol (numeral) to an actual quantity.

Q2

●	1
● ●	2
● ● ●	3
● ● ● ●	4
● ● ● ● ●	5

	6
	7
	8
	9
	10

M @ 🏠

BIGGER/SMALLER/SAME

Materials:
- Game cards
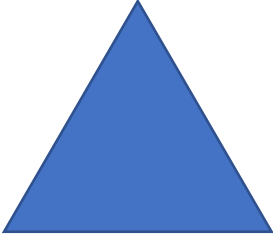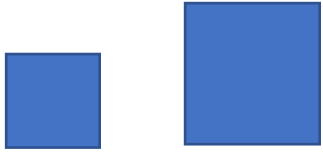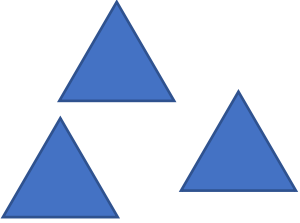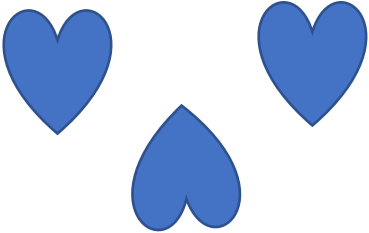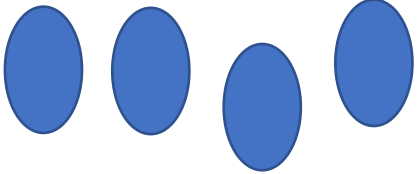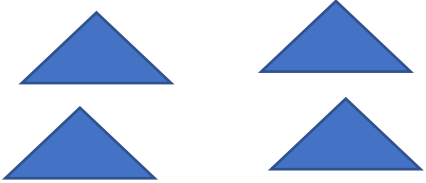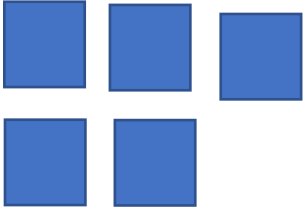
Instructions:
1. Divide the cards into two piles, one for Player A and the other for Player B.
2. Player A and Player B each turn over a card.
3. If Player A's card is bigger than Player B's, Player A keeps both cards.
4. If Player A's card is less than Player's, Player B keeps both cards.
5. If the cards are equal, both players turn over another card each and compare these as above.
6. When all cards from the original piles have been used, the game stops.
7. The player with the most cards, wins

What this is good for:
- Comparing two collections of objects

Q3, Q4

M @ 🏠
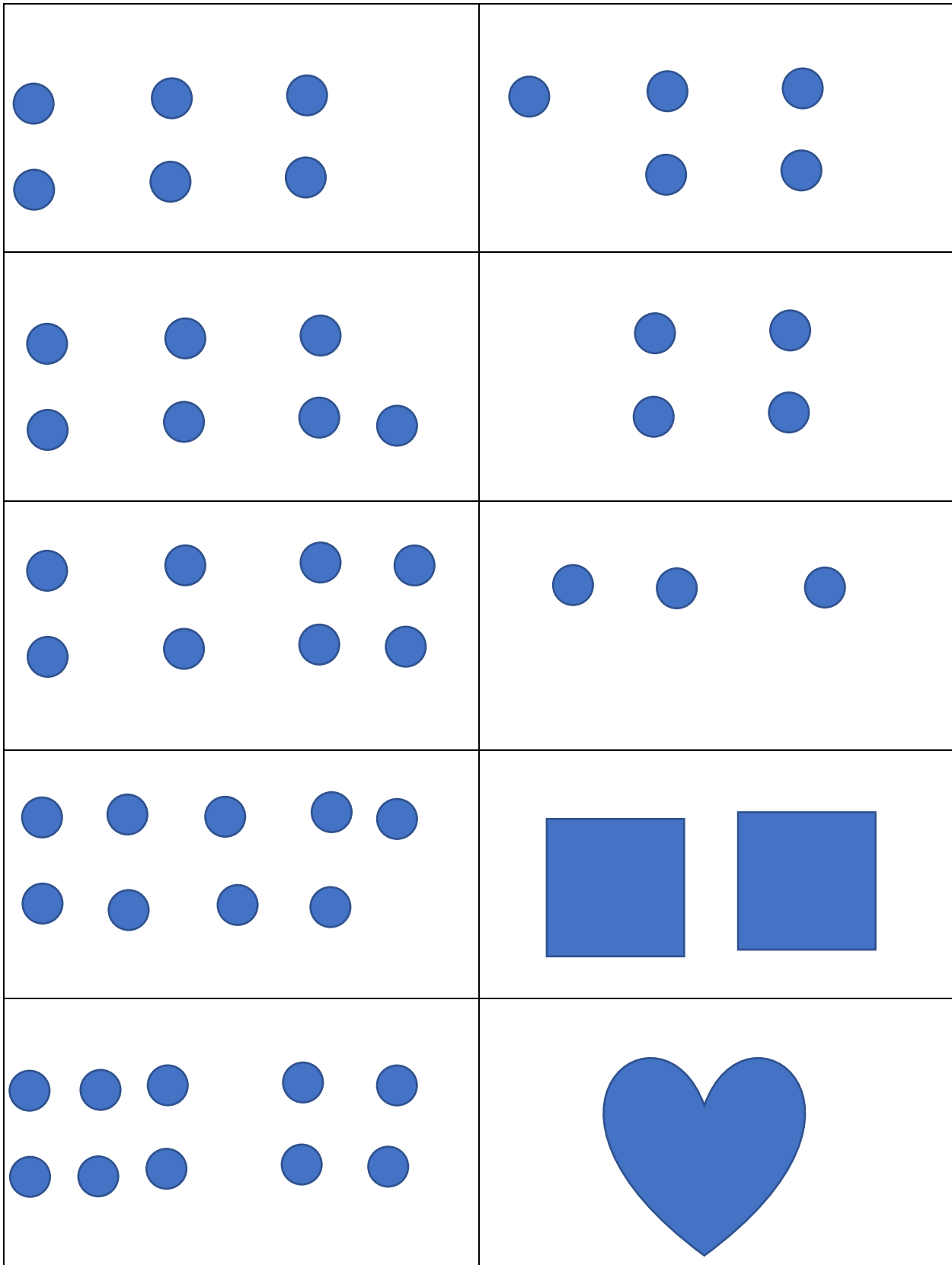
COUNTING ON (1)

Materials:
- Plastic cup
- Counters

Instructions:
1. Put between 4 and 7 counters on a table next to a cup.
2. Player A puts each counter into the cup, counting as they do so. When all the counters are in the cup, turn it over so that the upturned cup covers all the counters.
3. Ask Player A, "How many counters are under the cup?" (He/she should be able to answer without needing to recount the counters).
4. Take two more counters, put them next to the cup, so that Player A can see them and then carefully slide them under the cup to join the hidden counters. Now ask, "How many counters are under the cup now?"

What this is good for:
- Helps with counting on as opposed to counting the *whole* group.

Q 5

M @ 🏠

COUNTING ON (2)

Materials:
- Counters
- Plastic cup
- Game cards

Instructions:
1. Place the cards in a pile, face down.
2. Player A turns over one card and counts aloud that number of counters into the cup (e.g. "1, 2, 3.).
3. Player B turns over the next card and counts aloud that number of counters into the cup but continuing on from the previous count (e.g. "…, 4, 5.").
4. Continue like this until all cards have been used.

What this is good for:
- Helps with counting on (e.g. by saying "7, 8.") as opposed to counting the *whole* group.

Q 5

1	2	3	4
1	2	3	4
1	2	3	4

M @ 🏠

TWO BY TWO

Materials:
- Game cards
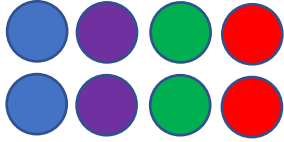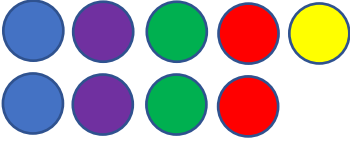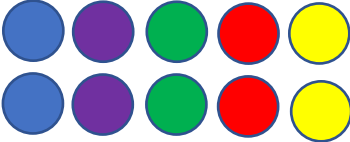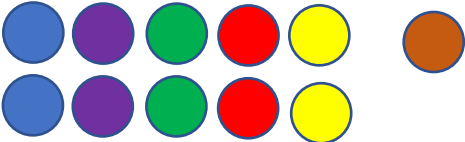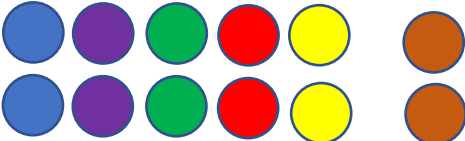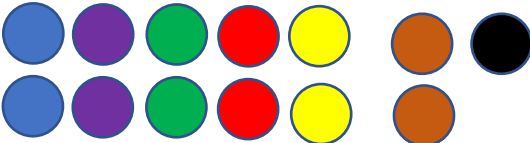
Instructions:
1. Place cards face down in a three-by-four arrangement.
2. Player A turns over 2 cards. If the cards match, the player keeps them. Players are encouraged to count by twos to confirm the total, or, in the case of an odd number, count by twos and add one at the end (e.g. "2, 4, 6, 8, 9".)
3. Player B takes a turn.
4. The player with the most cards, wins.

What this is good for:
- Knowing that counting by twos gives the same answer as counting by ones.

Q6

	8
	9
	10
	11
	12
	13

M @ 🏠
NUMBER BONDS

Materials:
- Game cards

Instructions:
1. Place cards face up in four rows of five.
2. Player A chooses two cards. If the number of dots on *both* cards adds to the number on the cards, then that player says the fact aloud and keeps both cards. Note: this means that both cards must have the same numeral. If not, turn them face down again.
3. Player B takes a turn.
4. Repeat until all cards are taken.

Variation:
- Have cards face down.

What this is good for:
- Knowing that numbers can be decomposed in different ways (e.g. 10 can be 5+5, 4+6, 3+7 etc.

Q7

8

8

8

8

8

8

9

9

9

9

9

9

10

10

10

10

10

10

10

10

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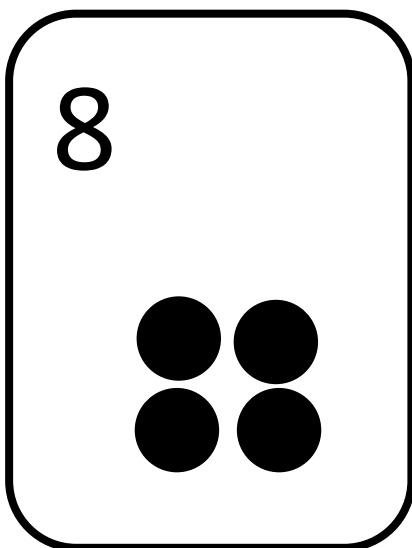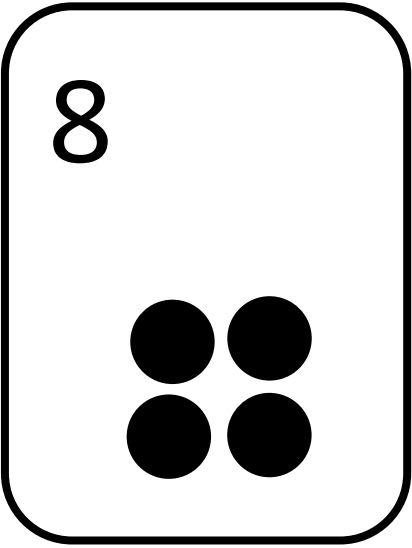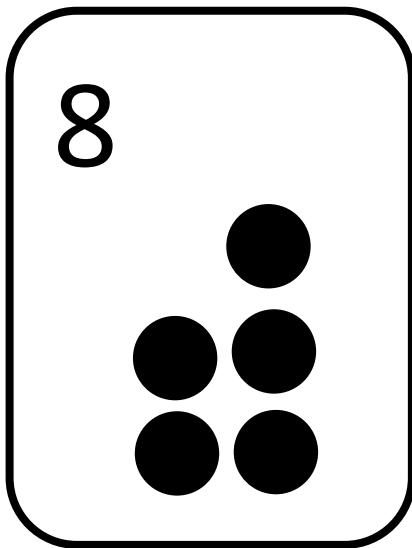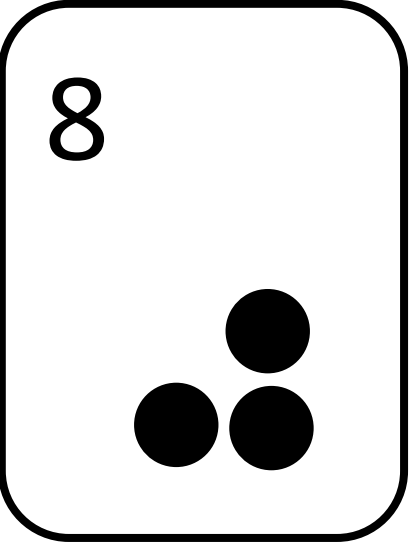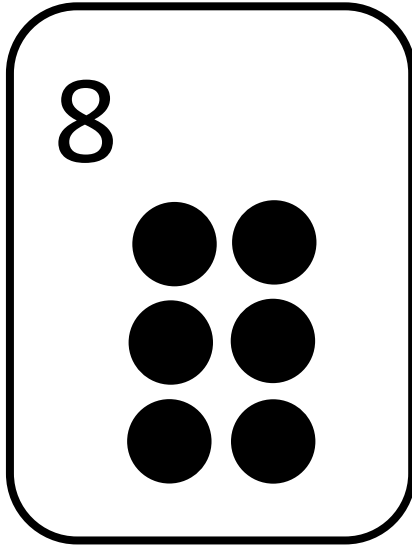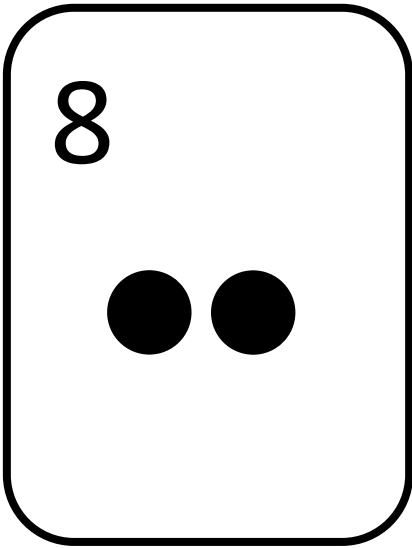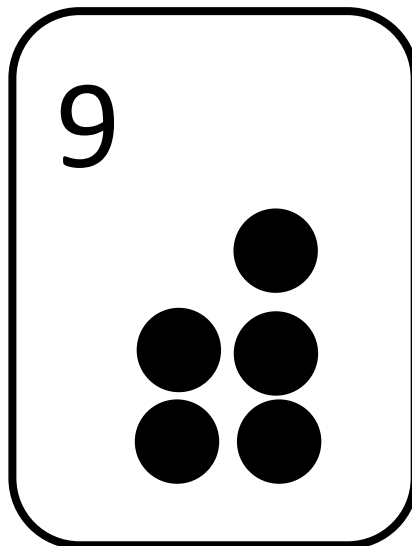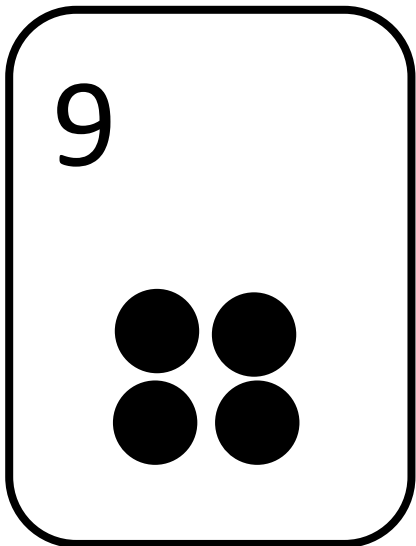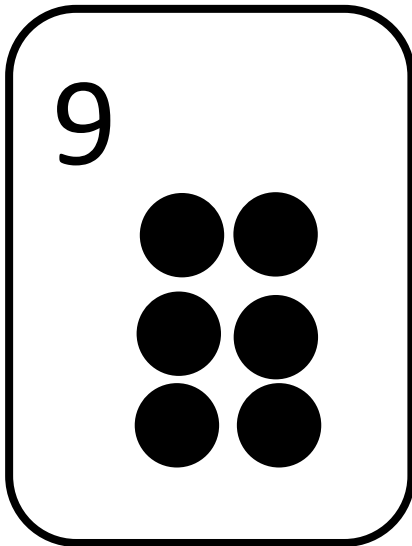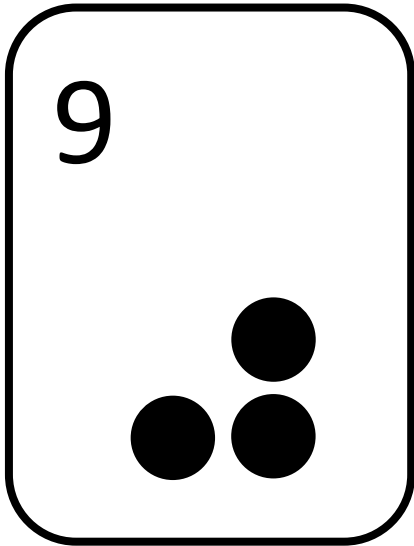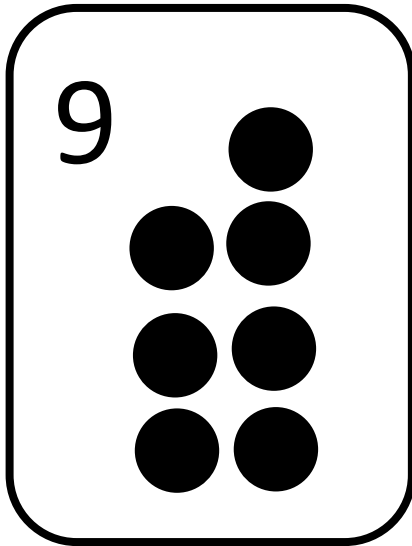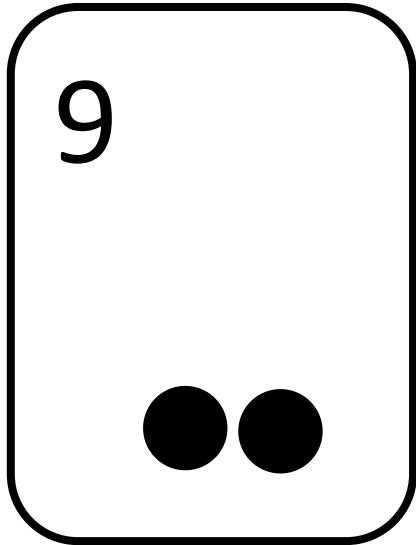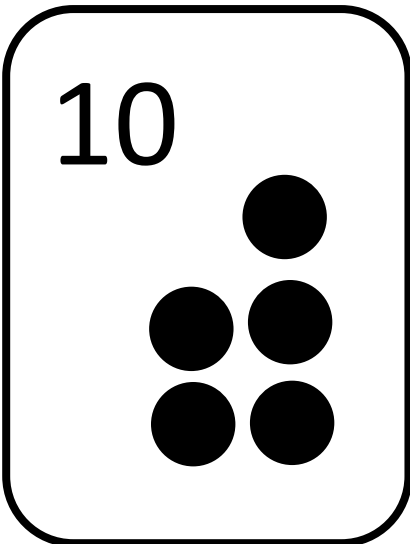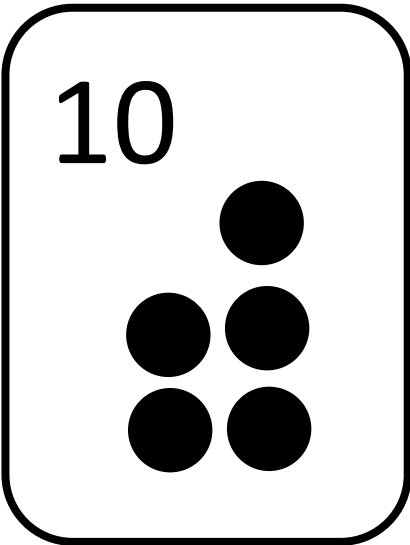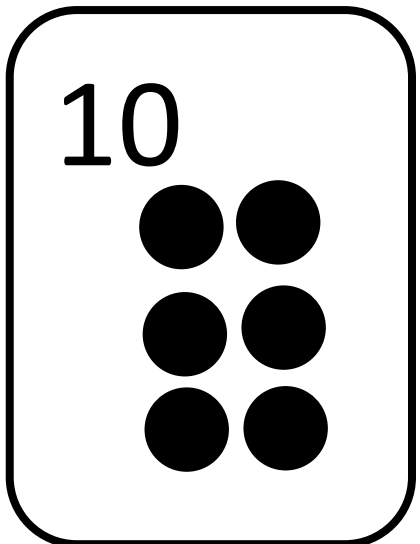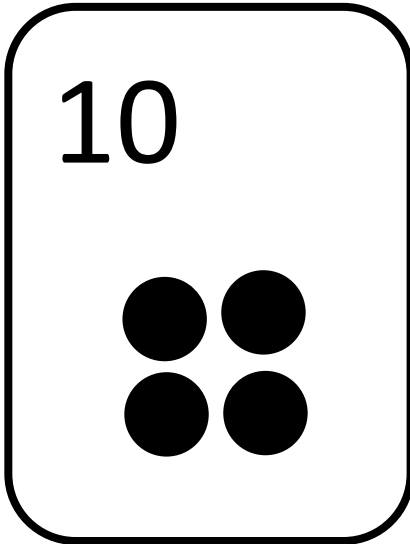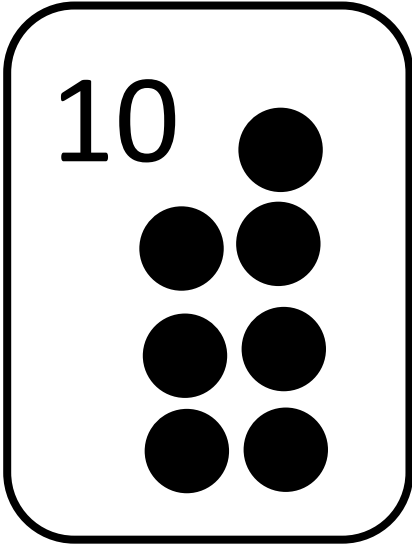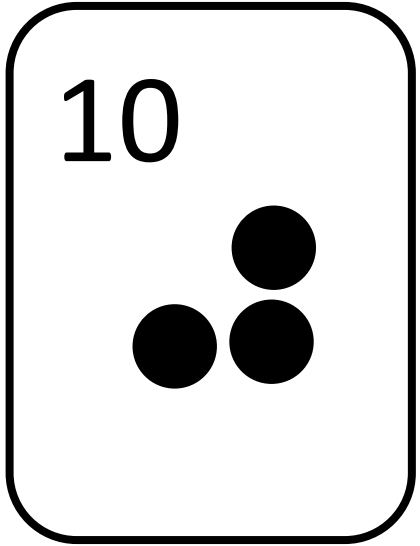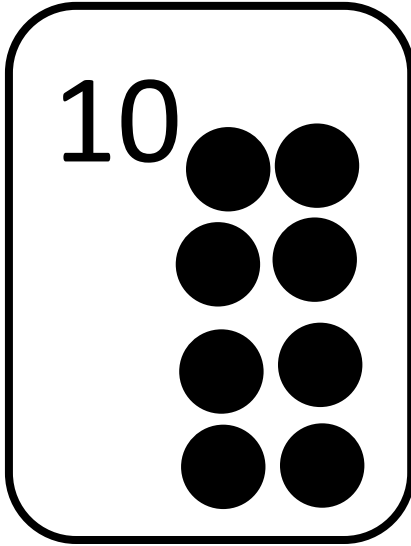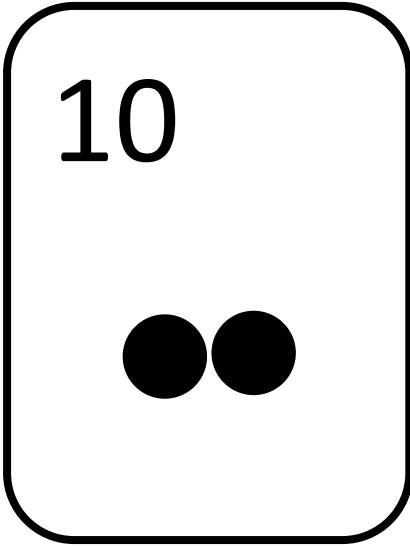
REACH 100

Materials: One die, score cards

Instructions:

1. Player A rolls the die
2. Player A then writes the number from the dice in the tens or ones. column. A zero must be placed into the other column for that round.
3. Player B then does the same.
4. Player A plays their second turn and writes their running total in the column provided.
5. Player B then does the same.
6. Repeat until all five turns have been taken by both players.
7. The player with the total as closest to 100, wins.

What this is good for:

- Learning about place-value in two-digit numbers.

Q8

Player A

Round	Tens	Ones	Running Total
1			
2			
3			
4			
5			

Player B

Round	Tens	Ones	Running Total
1			
2			
3			
4			
5			

M @ 🏠

REACH 200

Materials: Two dice, score cards

Instructions: The object of this game is to create five numbers with a total as close to 200 as possible. For each of the five rounds, players take turns to roll the two dice and decide which column (tens or ones) to put the two numbers into. Repeat for the remaining four rounds to create five numbers. Add these numbers. The person with the total closest to 200 wins.

What this is good for: Learning about place-value in three-digit numbers.

Q9

Player A

Round	Tens	Ones	Running Total
1			
2			
3			
4			
5			

Player B

Round	Tens	Ones	Running Total
1			
2			
3			
4			
5			

M @ 🏠

REACH 1000

Materials: Two dice, score cards

Instructions: The object of this game is to create five numbers with a total as close to 1000 as possible. For each of the five rounds, players take turns to roll the two dice and decide which two columns (hundreds, tens or ones) to put the two numbers into. A zero must be placed into the other column for that round. Repeat for the remaining four rounds to create five numbers. Add these numbers. The person with the total closest to 1000 wins.

What this is good for: Learning about place-value in three-digit numbers.

Q9

Player A

Round	Hundreds	Tens	Ones	Running Total
1				
2				
3				
4				
5				

Player B

Round	Hundreds	Tens	Ones	Running Total
1				
2				
3				
4				
5				

M @ 🏠

MAKE SIX NUMBERS: HUNDREDS

Materials:
- A pack of cards with just all the aces to 9s.
- 2 Game Boards for each player.
- Reference sheet.
- Pencil and paper to write down numbers in order.

Instructions:
1. Shuffle the 36 cards and deal to both players. Both players must keep their cards face down in a stack.
2. Each player turns over the top card in their stack and decides where to place it on their game card. Once the card has been placed, it cannot be moved.
3. Play continues until both players have placed each of their 18 cards.
4. Points are scored for each number that satisfies the required rule.
5. Players then read each of their five numbers. One extra point is awarded for each number that is said correctly.
6. Players then write their six numbers in order from the smallest to the largest. An extra two points is given if they do this correctly.
7. The person with the largest total score wins.

What this is good for: Learning about place-value to the hundreds and to compare and order numbers.

Q9, 10

A number between 100 and 300
2 points

A number between 500 and 700
2 points

A number between 700 and 900
2 points

A number with the same digit in the hundreds and the tens place
3 points

A number with the same digit in the hundreds, tens and the ones place
5 points

Chance (any number)
1 point

Say each number correctly: **1 point each.**

Write all 5 numbers in order correctly from least to greatest: **2 points**

Player A Game Card 1

A number between 100 and 300 **2 points**		
A number between 500 and 700 **2 points**		
A number between 700 and 900 **2 points**		

Player A Game Card 2

A number with the same digit in the hundreds and the tens place
3 points

A number with the same digit in the hundreds, tens and the ones place
5 points

Chance (any number)
1 point

Player B Game Card 1

A number between 100 and 300
2 points

A number between 500 and 700
2 points

A number between 700 and 900
2 points

Player B Game Card 2

A number with the same digit in the hundreds and the tens place
3 points

A number with the same digit in the hundreds, tens and the ones place
5 points

Chance (any number)
1 point

M @ 🏠

REACH 10 000

Materials: Two dice, score cards

Instructions: The object of this game is to create five numbers with a total as close to 10 000 as possible. For each of the five rounds, players take turns to roll the two dice and decide which two columns (thousands, hundreds, or tens) to put the two numbers into. A zero must be placed into the other two columns for that round. Repeat for the remaining four rounds to create five numbers. Add these numbers. The person with the total closest to 10 000 wins.

What this is good for: Learning about place-value in the thousands.

Q11

Player A

Round	Thousands	Hundreds	Tens	Ones	Running Total
1				0	
2				0	
3				0	
4				0	
5				0	

Player B

Round	Thousands	Hundreds	Tens	Ones	Running Total
1				0	
2				0	
3				0	
4				0	
5				0	

M @ 🏠

REACH 50 000

Materials: Two dice, score cards

Instructions: The object of this game is to create five numbers with a total as close to 50 000 as possible. For each of the five rounds, players take turns to roll the two dice and decide which two columns (thousands, hundreds, or tens) to put the two numbers into. A zero must be placed into the other two columns for that round. Repeat for the remaining four rounds to create five numbers. Add these numbers. The person with the total closest to 50 000 wins.

What this is good for: Learning about place-value in five-digit numbers.

Q11

Player A

Round	Thousands	Hundreds	Tens	Ones	Running Total
1				0	
2				0	
3				0	
4				0	
5				0	

Player B

Round	Thousands	Hundreds	Tens	Ones	Running Total
1				0	
2				0	
3				0	
4				0	
5				0	

M @ 🏠
REACH 10

Materials: One die, score cards

Instructions: The object of this game is to create five numbers with a total as close to 10 as possible. For each of the five rounds, players take turns to roll the die and decide which column (ones or tenths) to put the number into. A zero must be placed into the other column for that round. Repeat for the remaining four rounds to create five numbers. Add these numbers. The person with the total closest to 10 wins.

What this is good for: Learning about place-value to the tenths.

Q12

Player A

Round	Ones	Tenths	Running Total
1	•		
2	•		
3	•		
4	•		
5	•		

Player B

Round	Tens	Ones	Running Total
1	•		
2	•		
3	•		
4	•		
5	•		

M @ 🏠

NICE OR NAUGHTY MILLIONS

Materials: One die, score cards. If possible, use a 0 to 9 die.

Instructions: The object of this game is to create a 7-digit number according to the criteria for each game.

Nice Version.

Take turns to throw the die and decide which of your five cells to fill. Do this five times until all your cells are full. A point is given in each of the four games according to the following rules:

Game 1: Largest number gets 1 point.

Game 2: Smallest number gets 1 point.

Game 3: Number closest to 35 200 000 gets 1 point.

Game 4: Number closest to forty million gets 1 point.

The player with the most points after four games wins.

Naughty Version.

As above, but this time you can choose to either keep your number or put it into one of your opponent's cells of your choice. Players keep taking their turn to roll the die until all their cells are filled.

What this is good for: Learning about place-value to the millions.

Based on the nrich game 'Nice or Nasty'.

Q13

Game 1: Largest number gets 1 point.

Player 1:

					0	0	0

Player 2:

					0	0	0

Game 2: Smallest number gets 1 point.

Player 1:

					0	0	0

Player 2:

					0	0	0

Game 3: Number closest to 35 200 000 gets 1 point.

Player 1:

					0	0	0

Player 2:

					0	0	0

Game 4: Number closest to 40 000 000 gets 1 point.

Player 1:

					0	0	0

Player 2:

					0	0	0

M @ 🏠

REACH TEN MILLION

Materials: Three dice, score cards

Instructions: The object of this game is to create five numbers with a total as close to ten million as possible. For each of the five rounds, players take turns to roll the three dice and decide which three columns (millions, hundred thousands, ten thousands, or thousands) to put the three numbers into. A zero must be placed into the other columns for that round. Repeat for the remaining four rounds to create five numbers. Add these numbers. The person with the total closest to 10 000 000 wins.

What this is good for: Learning about place-value up to the millions.

Q13

Player A

Round	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones	Running Total
1					0	0	0	
2					0	0	0	
3					0	0	0	
4					0	0	0	
5					0	0	0	

Player B

Round	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones	Running Total
1					0	0	0	
2					0	0	0	
3					0	0	0	
4					0	0	0	
5					0	0	0	

M @ 🏠

MAKE SIX NUMBERS: HUNDREDTHS

Materials:
- A pack of cards with just all the aces to 9s.
- 2 Game Boards for each player.
- Reference sheet.
- Pencil and paper to write down numbers in order.

Instructions:
8. Shuffle the 36 cards and deal to both players. Both players must keep their cards face down in a stack.
9. Each player turns over the top card in their stack and decides where to place it on their game card. Once the card has been placed, it cannot be moved.
10. Play continues until both players have placed each of their 18 cards.
11. Points are scored for each number that satisfies the required rule.
12. Players then read each of their five numbers. One extra point is awarded for each number that is said correctly.
13. Players then write their six numbers in order from the smallest to the largest. An extra two points is given if they do this correctly.
14. The person with the largest total score wins.

What this is good for: Learning about place-value to the hundredths and to compare and order numbers.

Q14

Reference Sheet

A number between 1 and 3
2 points

A number between 5 and 7
2 points

A number between 8 and 10
2 points

A number with the same digit in the ones and the tenths place
3 points

A number with the same digit in the ones, tenths and the hundredths place
5 points

Chance (any number)
1 point

Say each number correctly: **1 point each.**

Write all 5 numbers in order correctly from least to greatest: **2 points**

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Player A Game Card 1

A number between 1 and 3
2 points

A number between 5 and 7
2 points

A number between 8 and 10
2 points

A number with the same digit in the ones and the tenths place
3 points

A number with the same digit in the ones, tenths and the hundredths place
5 points

Chance (any number)
1 point

Player B Game Card 1

A number between 1 and 3
2 points

A number between 5 and 7
2 points

A number between 8 and 10
2 points

Player B Game Card 2

A number with the same digit in the ones and the tenths place
3 points

A number with the same digit in the ones, tenths and the hundredths place
5 points

Chance (any number)
1 point

M @ 🏠

NICE OR NAUGHTY HUNDREDTHS

Materials: One die, score cards. If possible, use a 0 to 9 die.

Instructions: The object of this game is to create a 3-digit number according to the criteria for each game.

Nice Version.

Take turns to throw the die and decide which of your three cells to fill. Do this three times until all your cells are full. A point is given in each of the five games according to the following rules:

Game 1: Largest number gets 1 point.

Game 2: Smallest number gets 1 point.

Game 3: Number closest to 4 gets 1 point.

Game 4: Number closest to 3.5 gets 1 point.

Game 5: Number closest to 2.45 gets 1 point

The player with the most points after five games wins.

Naughty Version.

As above, but this time you can choose to either keep your number or put it into one of your opponent's cells of your choice. Players keep taking their turn to roll the die until all their cells are filled.

What this is good for: Learning about place-value to the hundredths.

Based on the nrich game 'Nice or Nasty'.

Q14

Game 1: Largest number gets 1 point.
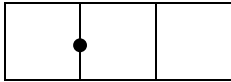
Player 1:   Player 2:

Game 2: Smallest number gets 1 point.

Player 1:   Player 2:

Game 3: Number closest to 4 gets 1 point.

Player 1:   Player 2:

Game 4: Number closest to 3.5 gets 1 point.

Player 1:   Player 2:

Game 5: Number closest to 2.45 gets 1 point.
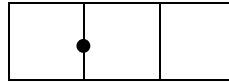
Player 1:   Player 2:

M @ 🏠

REACH 5

Materials: Two dice, score cards

Instructions: The object of this game is to create five numbers with a total as close to 5 as possible. For each of the five rounds, players take turns to roll the die and decide which two columns (ones, tenths or hundredths) to put the number into. A zero must be placed into the other column for that round. Repeat for the remaining four rounds to create five numbers. Add these numbers. The person with the total closest to 5 wins.
What this is good for: Learning about place-value to the hundredths.

Q14

Player A

Round	Ones	Tenths	Hundredths	Running Total
1		•		
2		•		
3		•		
4		•		
5		•		

Player B

Round	Ones	Tenths	Hundredths	Running Total
1		•		
2		•		
3		•		
4		•		
5		•		

M @ 🏠

NICE OR NAUGHTY THOUSANDTHS

Materials: One die, score cards. If possible, use a 0 to 9 die.

Instructions: The object of this game is to create a 4-digit number according to the criteria for each game.

Nice Version.

Take turns to throw the die and decide which of your four cells to fill. Do this four times until all your cells are full. A point is given in each of the five games according to the following rules:

Game 1: Largest number gets 1 point.

Game 2: Smallest number gets 1 point.

Game 3: Number closest to 4 gets 1 point.

Game 4: Number closest to 3.55 gets 1 point.

Game 5: Number closest to 2.222 gets 1 point

The player with the most points after five games wins.

Naughty Version.

As above, but this time you can choose to either keep your number or put it into one of your opponent's cells of your choice. Players keep taking their turn to roll the die until all their cells are filled.

What this is good for: Learning about place-value to the thousandths.

Based on the nrich game 'Nice or Nasty'.
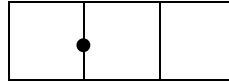
Q15

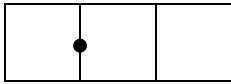Game 1: Largest number gets 1 point.
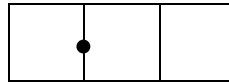
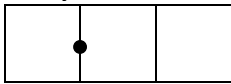Player 1:

Player 2:

Game 2: Smallest number gets 1 point.
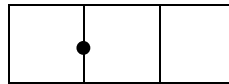
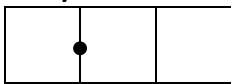Player 1:

Player 2:

Game 3: Number closest to 4 gets 1 point.

Player 1:

Player 2:

Game 4: Number closest to 3.55 gets 1 point.

Player 1:

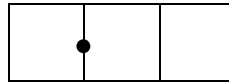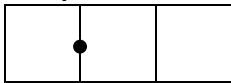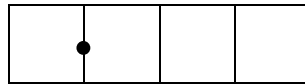Player 2:

Game 5: Number closest to 2.222 gets 1 point.

Player 1:

Player 2:

M @ 🏠

THE REGROUPING GAME

Materials: Three dice, score card.

Instructions: The object of this game is to regroup numbers to recreate a three- or four-digit score.

Player 1 rolls the three dice and adds them. They then decide which column (hundreds, tens or ones) to put this number into. They repeat this two more times so that all three columns are filled. Player 1 then regroups their numbers to write either a 3- or 4-digit score. For example, if they rolled 12, then 14, then 9, they might write these numbers in the columns like this:

H	T	O
12	9	14

This regroups to give a score of 1200 + 90 + 14 = 1304.

Player 2 does the same. This is the repeated for two more rounds so that both players have three 3- or 4-digit scores.

Points are then awarded as follows:

Person with highest score: **1 point**

Person with lowest score: **1 point**

Any score that is an even number: **1 point for each score**

Any score that has a 7 in it: **1 point for each 7**

Any score that is more than 1500: **1 point**

Any score that is less than 700: **1 point**

Any score with two digits the same: **2 points**

The person with the highest number of points wins
Variation: Use 4 or 5 dice.
What this is good for: Partitioning numbers in non-standard ways.

Q16

	Player 1					Player 2		
Round 1	H	T	O			H	T	O

Score: Score:

	Player 1					Player 2		
Round 2	H	T	O			H	T	O

Score: Score:

	Player 1					Player 2		
Round 3	H	T	O			H	T	O

Score: Score:

Points are then awarded as follows:

Person with highest score: **1 point**

Person with lowest score: **1 point**

Any score that is an even number: **1 point for each score**

Any score that has a 7 in it: **1 point for each 7**

Any score that is more than 1500: **1 point**

Any score that is less than 700: **1 point**

Any score with two digits the same: **2 points**

The person with the highest number of points wins

M@ 🏠

TRIPLE JUMP

Materials: One pack of cards, piece of paper to jot down numbers as necessary.

Instructions: Separate the pack of cards into two piles face down: a *digit* pile made up of all the cards ace to nine, and an *operations* pile made up of all the tens, jacks, queens and kings. Each card represents a different operation:

Any ten = x 10	Any jack = x 100	Any queen = x 1000	Any king = ÷ 10

Player 1 then turns over 2 cards from the *digits pile* to form a 2-digit number in the order in which they appear. For example, if they turn over a 5 followed by a 7 then this gives them the starting number 57. Player 1 then turns over a card from the *operations pile* and carries out the corresponding operation. For example, if they turned over a jack, then they do 57 x 100 to get 5700. They then turn over another operations card and perform this operation on the previous product (i.e. the 5700) They do this once more to get a final answer. All cards are then returned to their respective piles and the piles then shuffled.
Player 2 then takes their turn and this completes the first round. Three rounds are held.

Points are awarded in each round as follows:
Round 1: Highest product gets **1 point.**
Round 2: Lowest product gets **1 point.**
Round 3: The player with the product closest to 5 000 000 gets **1 point.**

What this is good for: Learning about the multiplicative nature of place value.

Q17

M@ 🏠

DECIMAL TRIPLE JUMP

Materials: One pack of cards, piece of paper to jot down numbers as necessary.

Instructions: Separate the pack of cards into two piles face down: a ***digit*** pile made up of all the cards ace to nine, and an ***operations*** pile made up of all the tens, jacks, queens and kings. Each card represents a different operation:

Any ten = x 10	Any jack = x 100	Any queen = ÷ 10	Any king = ÷ 100

Player 1 then turns over 2 cards from the ***digits pile*** to form a 2-digit number between 1 and 10 in the order in which they appear. For example, if they turn over a 5 followed by a 7 then this gives them the starting number 5.7. Player 1 then turns over a card from the ***operations pile*** and carries out the corresponding operation. For example, if they turned over a jack, then they do 5.7 x 100 to get 570. They then turn over another operations card and perform this operation on the previous product (i.e. the 570) They do this once more to get a final answer. All cards are then returned to their respective piles and the piles then shuffled. Player 2 then takes their turn and this completes the first round. Three rounds are held.

Points are awarded in each round as follows:
Round 1: Highest product gets **1 point.**
Round 2: Lowest product gets **1 point.**
Round 3: The player with the product closest to 5 gets **1 point.**

What this is good for: Learning about the multiplicative nature of place value.

Q18

M @ 🏠

OH NO, A BILLION!

Materials: A deck of playing cards with the jokers removed. Paper and pencil to keep track of the product.

Instructions: The object of this game is to force your opponent to go over a billion.

Card Values and Operations:

Aces: wild card that can represent any other card in the deck

2 to 9:   add their face value to the *leading digit* (see below for examples)

10:                  multiply by 10

Jacks: multiply by hundred

Queens: divide by 10

Kings: Multiply by 1

Directions:

1. Deal four cards to each player and place the remaining cards in a stack, face down.
2. Turn over the top card. If it is a 2 to a 9 place it face down: this will be your starting number. If not replace the card and turn over the next card until you get a 2 to a 9.
3. Players then take turns playing one card from their hand to affect the current product according to the operations above. For example, if the first card is a 7 and then a Jack is played, the new product is 700. If a 6 is then played, the 6 is added to the *leading digit* (i.e. the 7) to create 1300. If a 9 is then played, the 9 is added to the *leading digit* (i.e. the 1) to create 10 300.
4. After each turn, write the current product on a piece of paper below the previous product.
5. Each time a player plays a card, they must replace it with the top card from the face down deck.
6. Play continues until one player is forced to go over a billion. The other person who forced the player to go over a billion is the winner.

What this is good for: Reading and saying numbers to one billion, knowing the multiplicative nature of the place value system.

Q19 21

Inspired by Marilyn Burns's Oh No, 99!