Number bonds can be a useful, flexible way to remember addition & subtraction math facts. The first step is to "decompose" the numbers – figure out all the pairs of numbers that can be added together to make the number you are thinking about. Try that here.

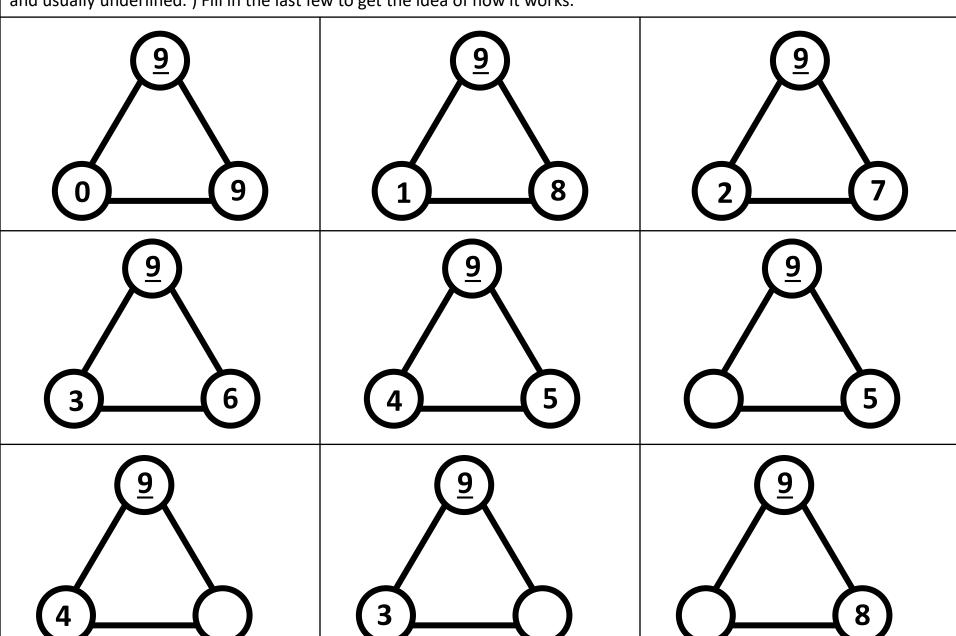
What are all the pairs of numbers that make 6?	What are all the pairs of numbers that make 7?	What are all the pairs of numbers that make 8?	What are all the pairs of numbers that make 9?
<u> </u>			

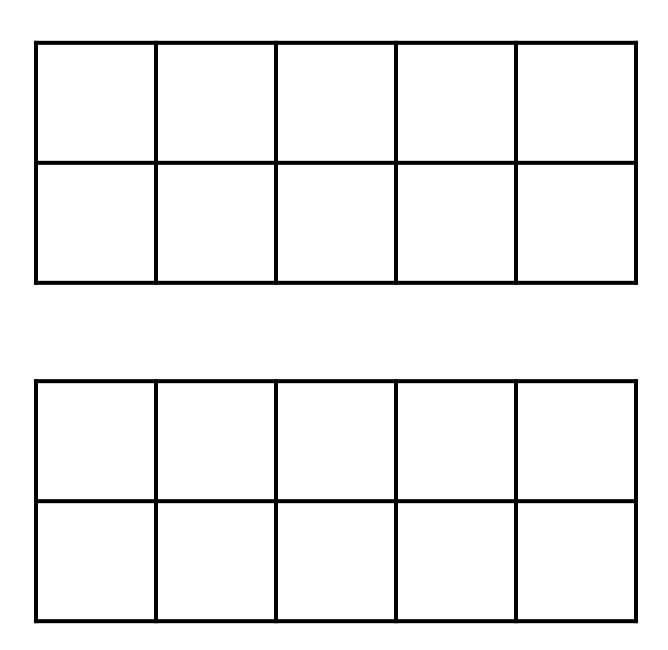
The shaded pairs show facts that we will learn in this packet.

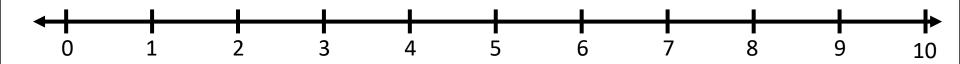
+	0	1	2	3	4	5	6	7	8	9	10
0	0 + 0 = 0	1 + 0 = 1	2 + 0 = 2	3 + 0 = 3	4 + 0 = 4	5 + 0 = 5	6 + 0 = 6	7 + 0 = 7	8 + 0 = 8	9 + 0 = 9	10 + 0= 10
1	0 + 1 = 1	1 + 1 = 2	2 + 1 = 3	3 + 1 = 4	4 + 1 = 5	5 + 1 = 6	6 + 1 = 7	7 + 1 = 8	8 + 1 = 9	9 + 1 = 10	10 + 1 = 11
2	0 + 2 = 2	1 + 2 = 3	2 + 2 = 4	3 + 2 = 5	4 + 2 = 6	5 + 2 = 7	6 + 2 = 8	7 + 2 = 9	8 + 2 = 10	9 + 2 = 11	10 + 2 = 12
3	0 + 3 = 3	1 + 3 = 4	2 + 3 = 5	3 + 3 = 6	4 + 3 = 7	5 + 3 = 8	6 + 3 = 9	7 + 3 = 10	8 + 3 = 11	9 + 3 = 12	10 + 3 = 13
4	0 + 4 = 4	1 + 4 = 5	2 + 4 = 6	3 + 4 = 7	4 + 4 = 8	5 + 4 = 9	6 + 4 = 10	7 + 4 = 11	8 + 4 = 12	9 + 4 = 13	10 + 4 = 14
5	0 + 5 = 5	1+5=6	2 + 5 = 7	3 + 5 = 8	4 + 5 = 9	5 + 5 = 10	6 + 5 = 11	7 + 5 = 12	8 + 5 = 13	9 + 5 = 14	10 + 5 = 15
6	0 + 6 = 6	1 + 6 = 7	2 + 6 = 8	3 + 6 = 9	4 + 6 = 10	5 + 6 = 11	6 + 6 = 12	7 + 6 = 13	8 + 6 = 14	9 + 6 = 15	10 + 6 = 16
7	0 + 7 = 7	1 + 7 = 8	2 + 7 = 9	3 + 7 = 10	4 + 7 = 11	5 + 7 = 12	6 + 7 = 13	7 + 7 = 14	8 + 7 = 15	9 + 7 = 16	10 + 7 = 17
8	0 + 8 = 8	1+8=9	2 + 8 = 10	3 + 8 = 11	4 + 8 = 12	5 + 8 = 13	6 + 8 = 14	7 + 8 = 15	8 + 8 = 16	9 + 8 = 17	10 + 8 = 18
9	0 + 9 = 9	1 + 9 = 10	2 + 9 = 11	3 + 9 = 12	4 + 9 = 13	5 + 9 = 14	6 + 9 = 15	7 + 9 = 16	8 + 9 = 17	9 + 9 = 18	10 + 9 = 19
10	0 + 10 = 10	1 + 10 = 11	2 + 10 = 12	3 + 10 = 13	4 + 10 = 14	5 + 10 = 15	6 + 10 = 16	7 + 10 = 17	8 + 10 = 18	9 + 10 = 19	10 + 10 = 20

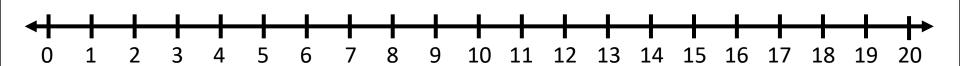
<sup>\*</sup> Don't forget the commutative (turn around) property. For example: 2 + 5 = 7 and 5 + 2 = 7.

Number bonds are just a way to visually think about these pairs of numbers. If you know two numbers in the number bond – you can figure out the third. Here is an example of the number bonds for 9. (Hint: The sum is at the top of the triangle and usually underlined.) Fill in the last few to get the idea of how it works.









## 5-in-a-Row

## **Materials needed:**

Deck of addition flashcards (Well shuffled)

## **Object of the game:**

Be the first to get 5 cards whose answers make 5-in-a-Row in numerical order. For example, 0 to 4, 2 to 6, 5 to 9.

## To Play:

- Make a stack of the flashcards face down– and put it where everyone can reach it.
- Take turns drawing a card, saying the problem and the answer ("three plus three equals six") and putting it down in a row in front of you face up. If you get the answer wrong, put it back on the bottom of the deck and it's the other person's turn.
- You are building a row of cards that are in numerical order by answer. For example, 4 + 1 which equals 5, would come right before 3 + 3 which equals 6.
- When you get a card that has the same answer as another card you already have, put it on top of the card with the same answer.

#### To win:

The first person to have 5 cards (or stacks of cards) in a row wins.

## Flashcard Maze

### Materials needed:

- Flashcards
- 6-sided die
- Game pieces

## Prep:

Lay out the flashcards in a maze, face down.

### To Play:

Take turns rolling the dice and moving that number of spaces on the maze. When you land on a card, turn it over and answer the problem. If you get it correct, leave the card face up. You get to stay in that place. If you get it wrong, you have to go back to where you were before you rolled.

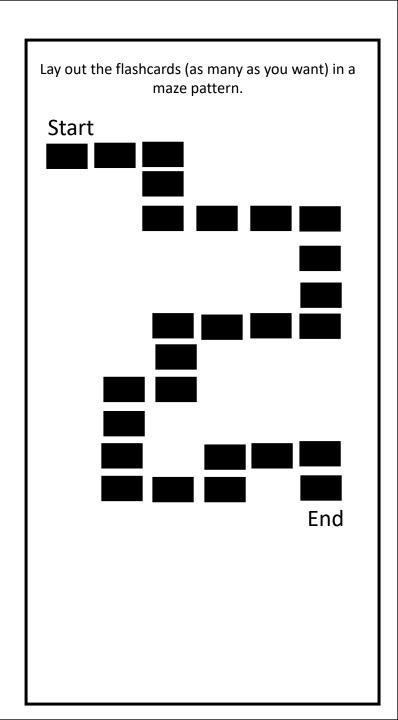
If you land on a card that has already been turned over, you must say a problem that would have the same answer as the card where you landed. For example, if you land on "2 + 3," but it has already answered. You can say "2 + 3 = 5, and 4 + 1 also equals 5."

If you land on a "+ 0 card," move 2 spaces back (but do not turn over that card).

If you land on a "+10" card move 2 more spaces forward (but do not turn over that card).

#### To win:

First player to complete the maze wins.



# **I Spy**

#### Materials needed:

· Flash cards

#### Prep:

Lay out 9 flashcards in an array, face up. Put the rest of the cards in a stack face down where everyone can reach them.

### To Play:

1<sup>st</sup> player draws a card and answers the problem. If he gets it right, he keeps the card and he looks at the array. He can pick up any other cards on the array that have the same answer as the card he drew. (Replace any picked up cards with cards from the draw stack.)

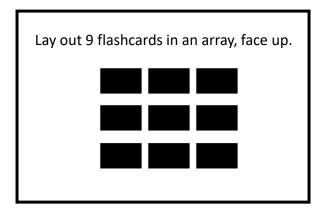
If he misses the problem, put the card back on the bottom of the draw pile.

If he accidentally picks up a card that does not have the same answer as the card he drew, he must put any cards he picked up from the array back in the array.

Player 2 does the same and so on.

#### To win:

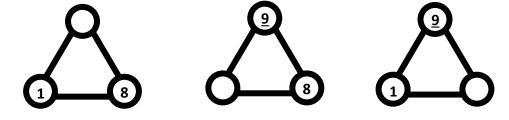
First player to get 20 cards wins. Or you can play to a certain time limit or until you run out of cards – then the person with the most cards wins.



# **Number Bond STEAL!**

**Object of the Game:** Collect 3 "books." A "book" is a set with all three "versions" of the same number bond.

For example:



**To play: Shuffle** the cards including the "STEAL!" cards. Put them in a stack face down (number side down) where everyone can reach them. This is the draw pile.

The first player draws a card and adds it to his/her collection. Collections must be displayed face up where everyone can see them. The rest of the players do the same. Players continue drawing cards, and placing them face up – grouping them into books where appropriate. Once a player gets a complete book, those cards are protected and cannot be stolen. The player can turn them over to indicate they are protected.

If a player draws a "STEAL!" card, that player can steal one card from any other player. Discard the STEAL! Card in a pile next to the draw pile. Players cannot save STEAL! Cards, they must use them when they get them.

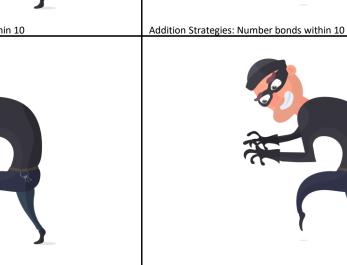
**To win:** First player to get three complete books wins. If you run out of cards before one player wins, you can play "sudden death" by having the players take turns stealing from each other until the first player gets 3 complete books.

**Printing:** Print landscape, 2-sided, flip on short side.

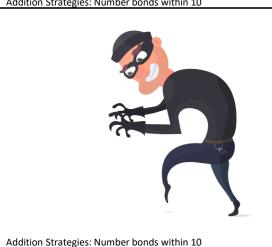












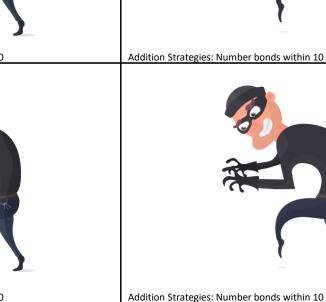
Addition Strategies: Number bonds within 10 Addition Strategies: Number bonds within 10

STEAL!	STEAL!	STEAL!
STEAL!	STEAL!	STEAL!
STEAL!	STEAL!	STEAL!











Addition Strategies: Number bonds within 10

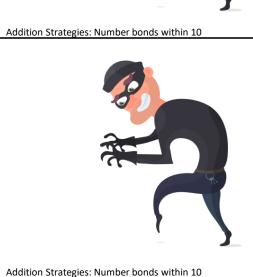
STEAL!	STEAL!	STEAL!
STEAL!	STEAL!	STEAL!
STEAL!	STEAL!	STEAL!

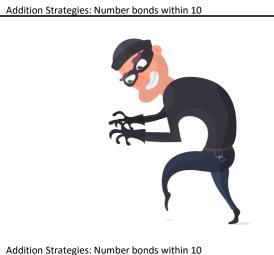


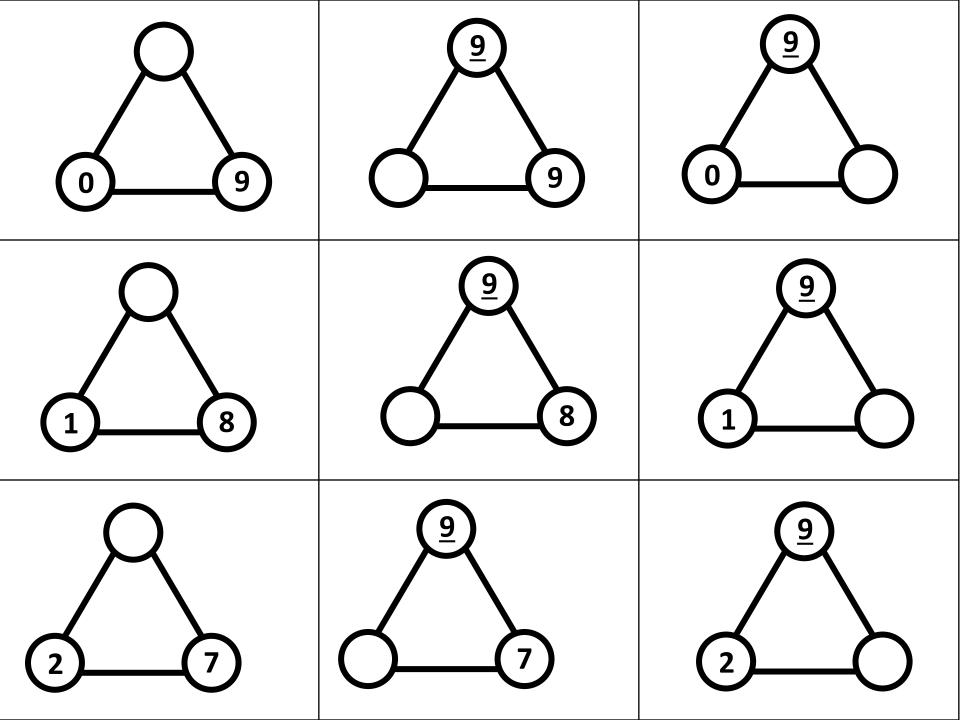










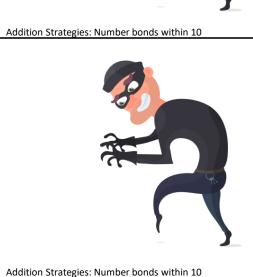


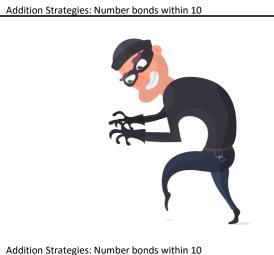


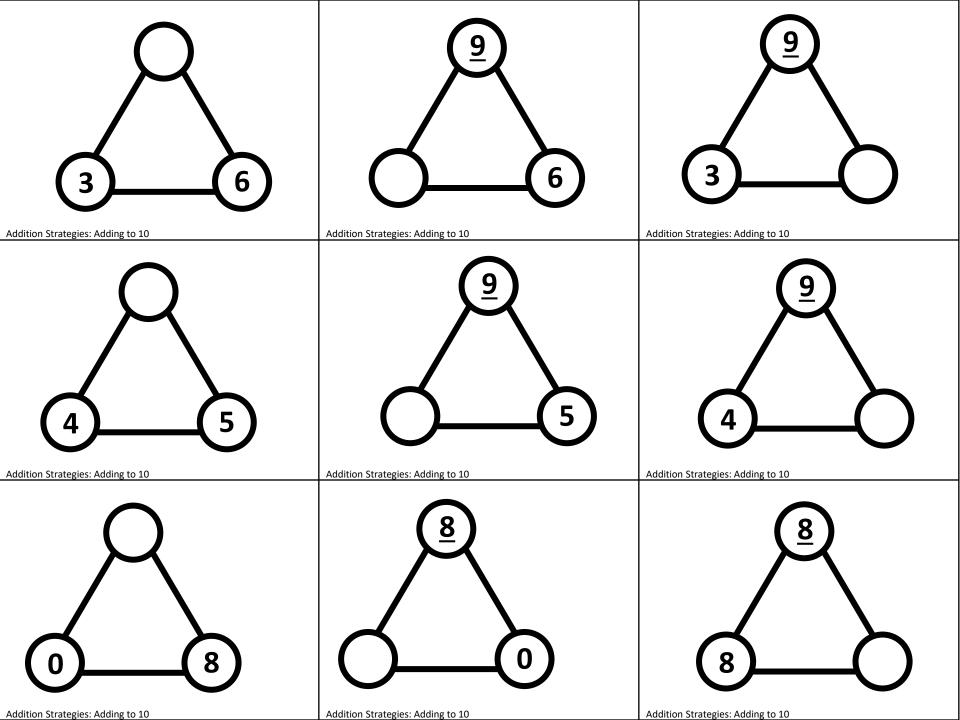










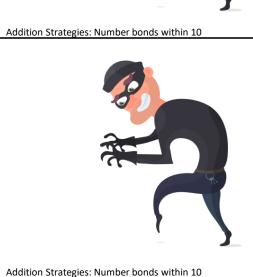


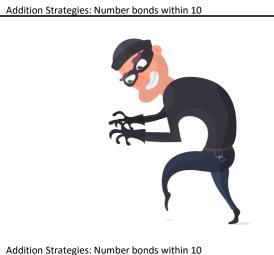


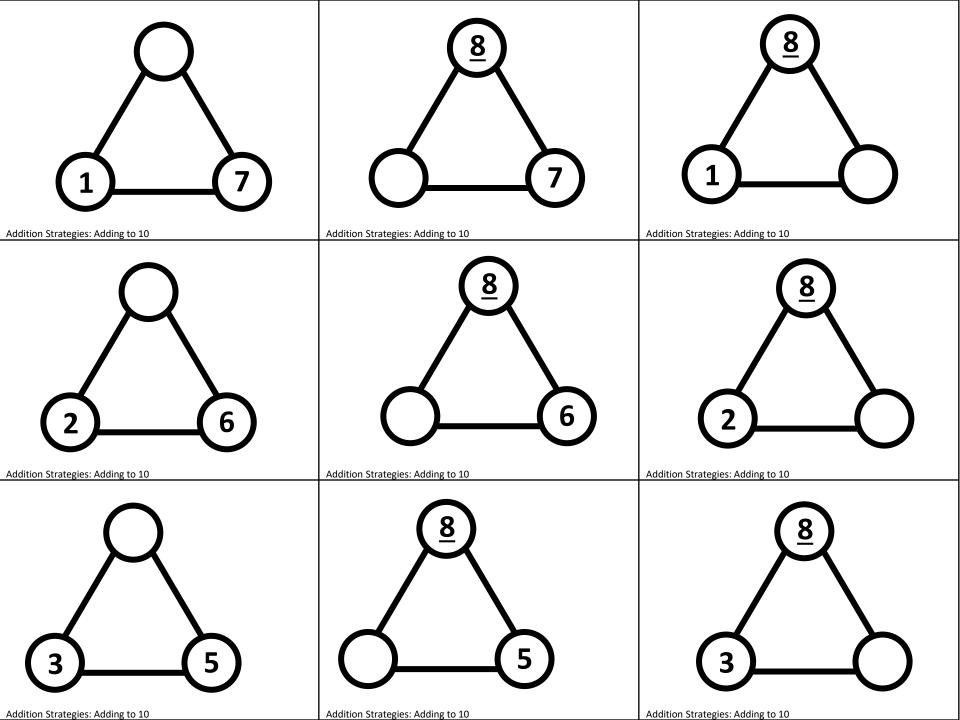




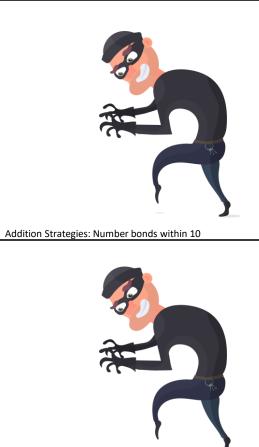








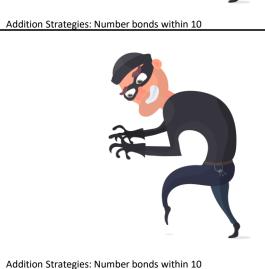


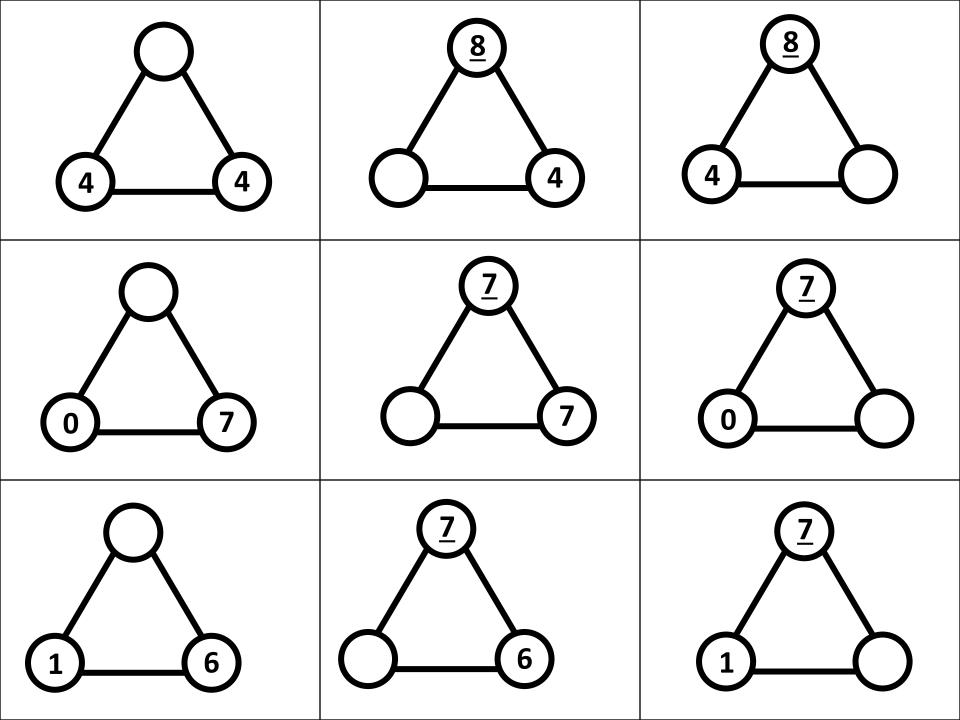




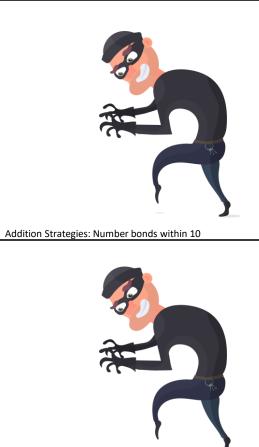








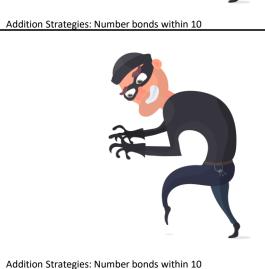


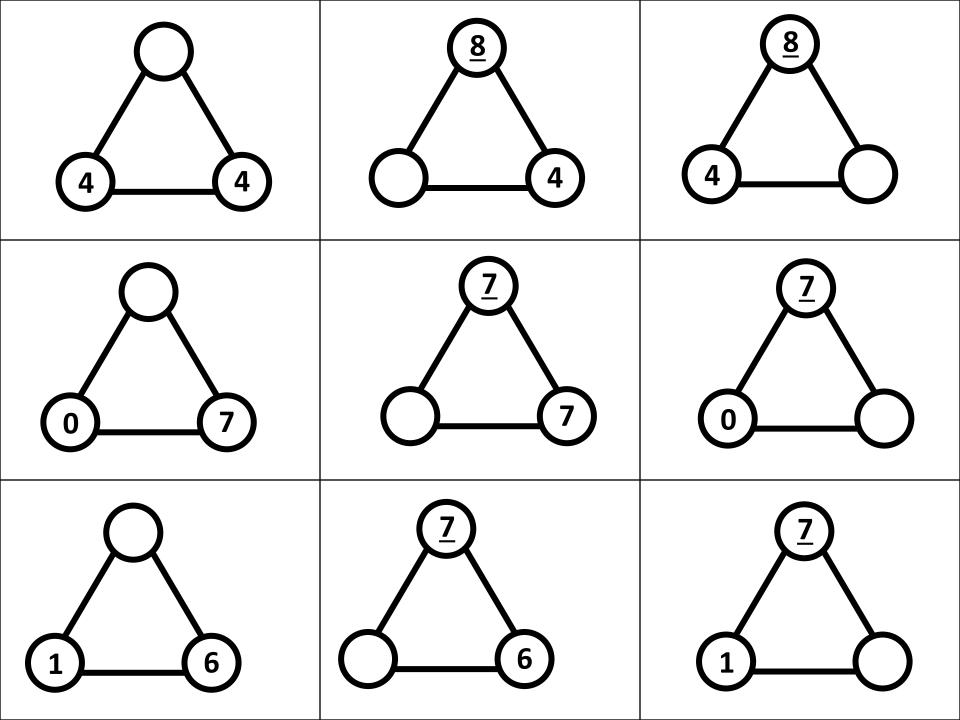










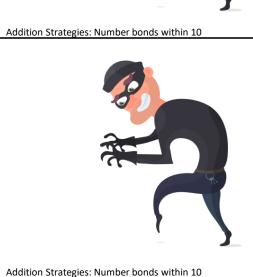


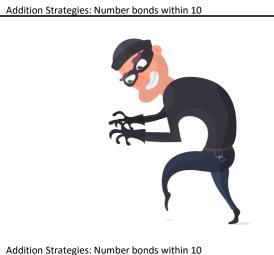


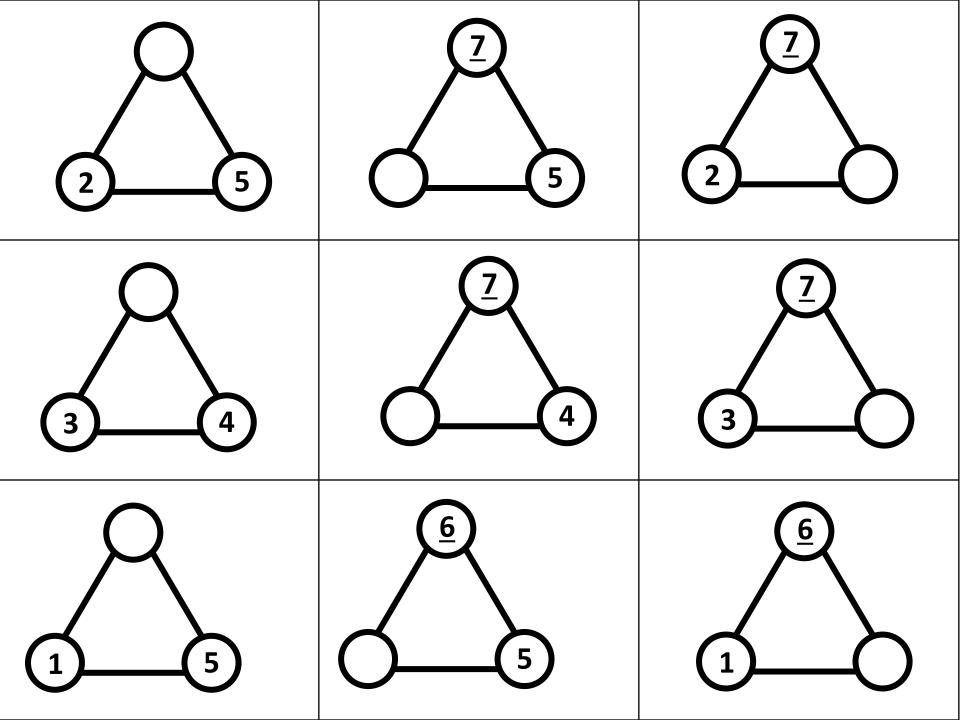










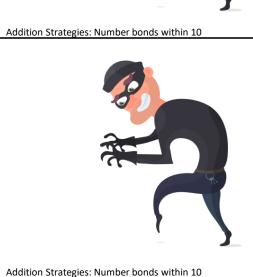


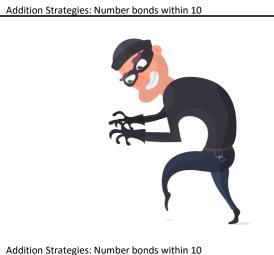


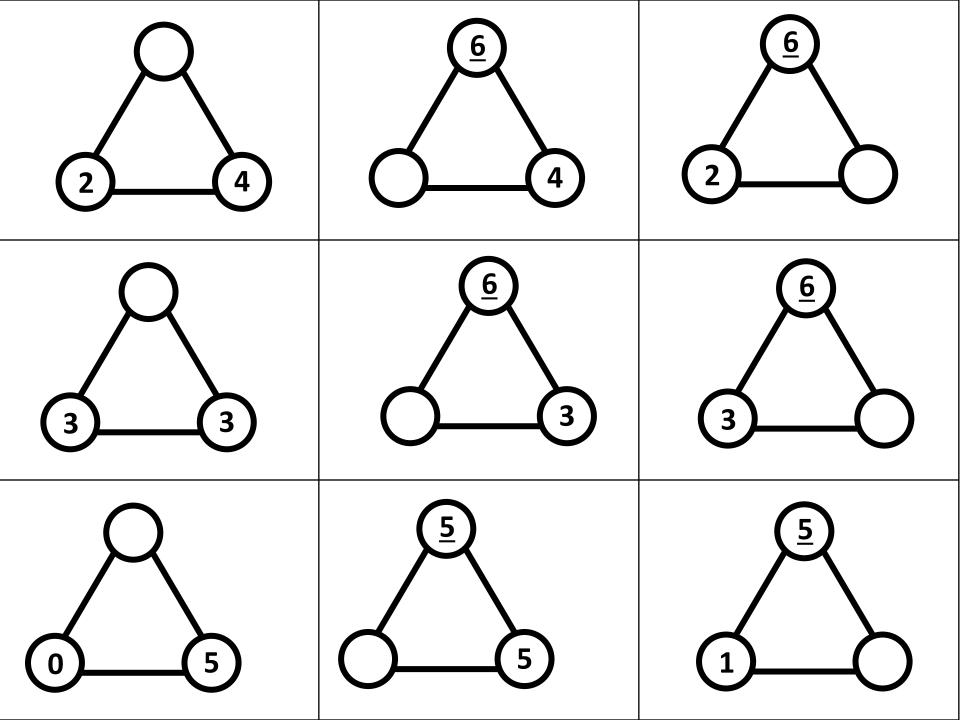










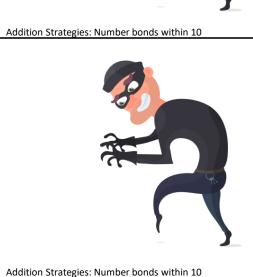


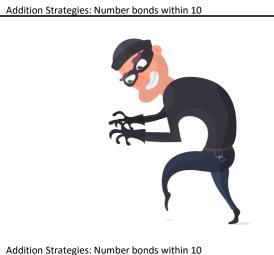


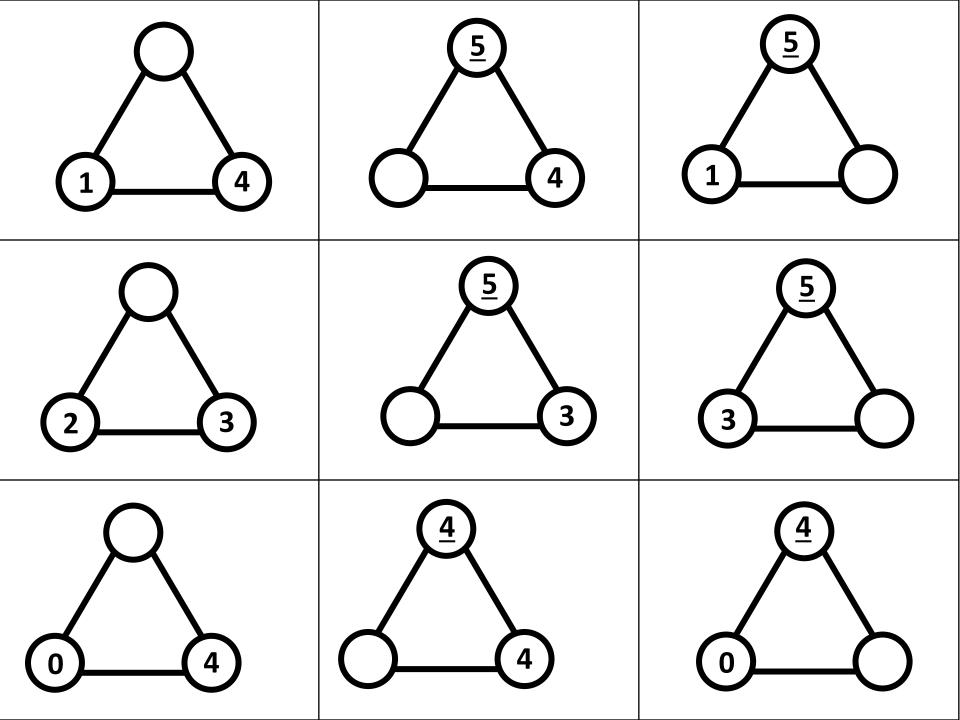










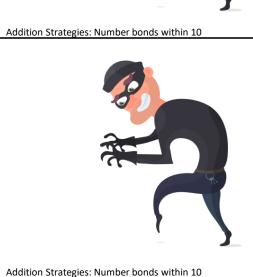


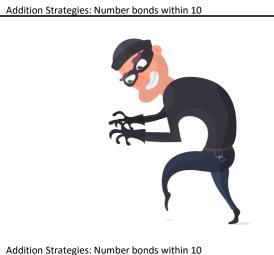


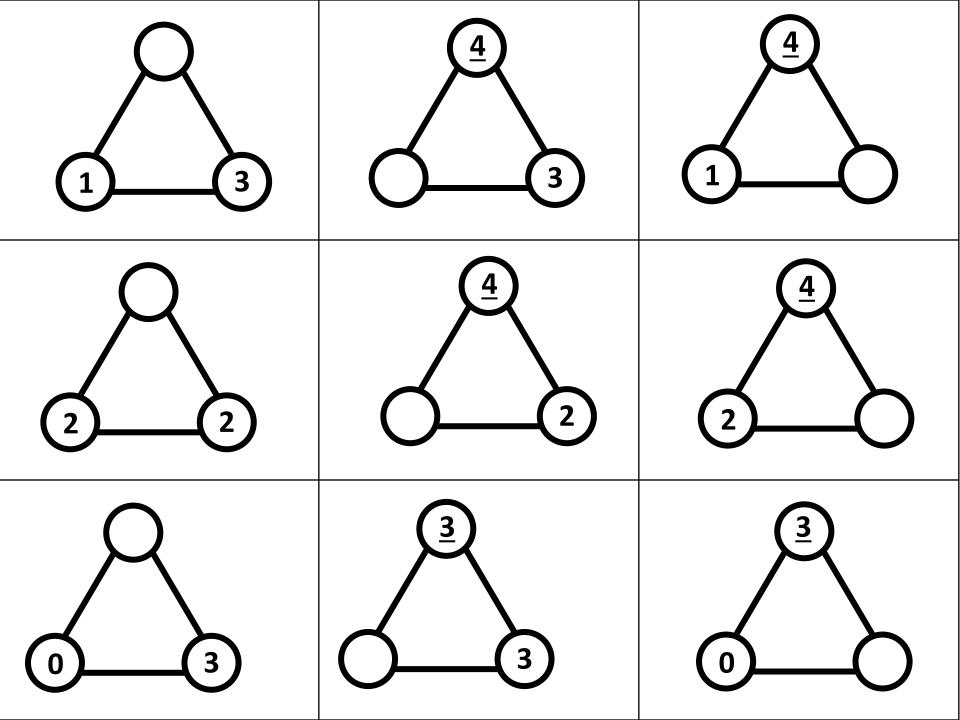


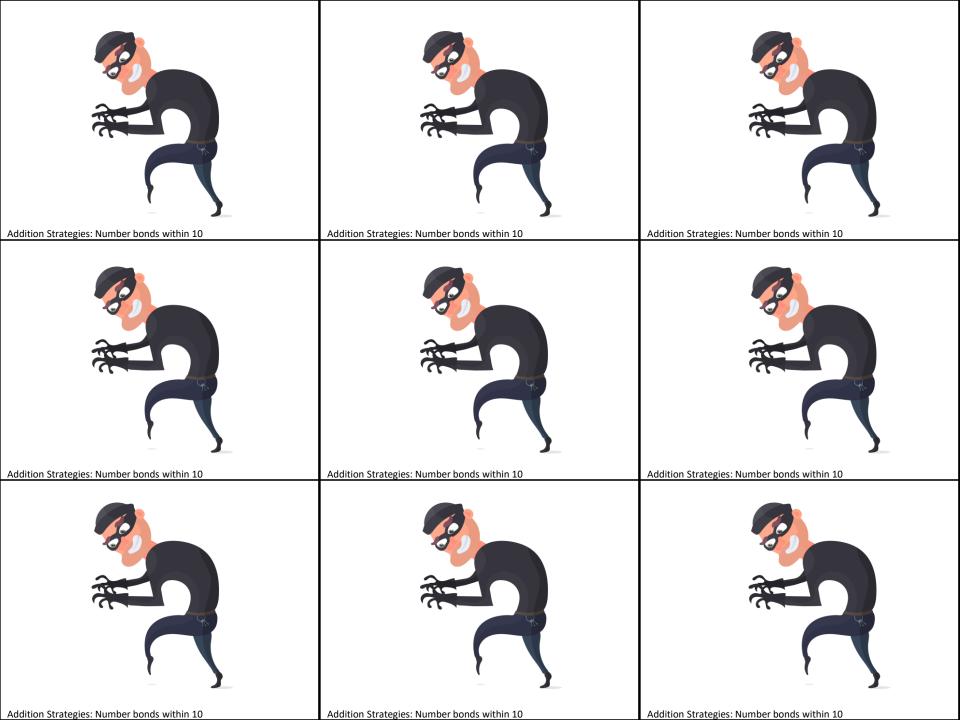


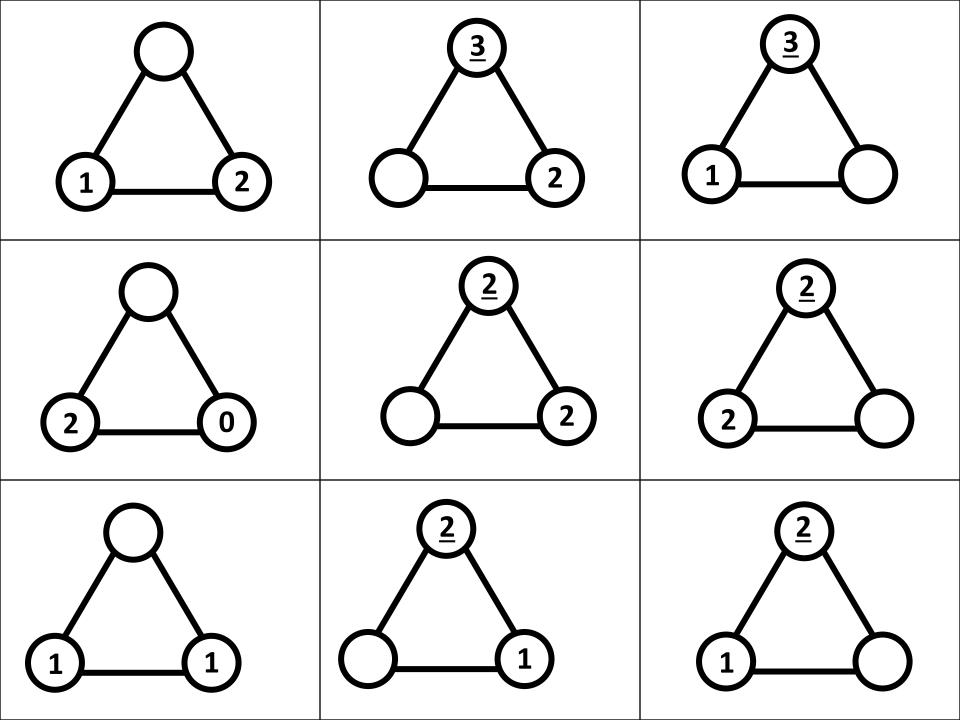












10	+	0	
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$$0 + 10 =$$

9 + 1 =

Addition Strategies: Number bonds within 10

Addition Strategies: Number bonds within 10 Addition Strategies: Number bonds within 10

1 + 9 =

2 + 8 =

8 + 2 =

Addition Strategies: Number bonds within 10

Addition Strategies: Number bonds within 10

Addition Strategies: Number bonds within 10 Addition Strategies: Number bonds within 10

7 + 3 =

3 + 7 =

6 + 4 =

Addition Strategies: Number bonds within 10

5 + 5 =

9 + 0 =

Addition Strategies: Number bonds within 10

Addition Strategies: Number bonds within 10

Addition Strategies: Number bonds within 10

0 + 9 =

8 + 1 =

1 + 8 =

Addition Strategies: Number bonds within 10

Addition Strategies: Number bonds within 10

within 10 Addition Strategies: Number bonds within 10

7 + 2 =

2 + 7 =

6 + 3 =

Addition Strategies: Number bonds within 10

nds within 10 Addition Strategies: Number bonds within 10

oonds within 10 Addition Strategies: Number bonds within 10

4 + 5 =

5 + 4 =

Addition Strategies: Number bonds within 10

0 + 8 =

8 + 0 =

1 + 7 =

Addition Strategies: Number bonds within 10

7 + 1 = 2 + 6 =

6 + 2 =

Addition Strategies: Number bonds within 10

nds within 10 Addition Strategies: Number bonds within 10

4 + 4 =

Addition Strategies: Number bonds within 10

Addition Strategies: Number bonds within 10

Addition Strategies: Number bonds within 10

0 + 7 =

7 + 0 =

1 + 6 =

Addition Strategies: Number bonds within 10

Addition Strategies: Number bonds within 10

Addition Strategies: Number bonds within 10

6 + 1 =

2 + 5 =

5 + 2 =

Addition Strategies: Number bonds within 10

nds within 10 Addition Strategies: Number bonds within 10

onds within 10 Addition Strategies: Number bonds within 10

4 + 3 =

0 + 6 =

Addition Strategies: Number bonds within 10

6 + 0 =

1 + 5 =

5 + 1 =

Addition Strategies: Number bonds within 10

2 + 4 =

Addition Strategies: Number bonds within 10

4 + 2 =

3 + 3 =

Addition Strategies: Number bonds within 10 Addition Strategies: Number bonds within 10

0	+	5	

5 + 0 =

1 + 4 =

Addition Strategies: Number bonds within 10

4 + 1 =

2 + 3 =

3 + 2 =

Addition Strategies: Number bonds within 10

Addition Strategies: Number bonds within 10

Addition Strategies: Number bonds within 10

4 + 0 =

0 + 4 =

3 + 1 =

Addition Strategies: Number bonds within 10

Addition Strategies: Number bonds within 10