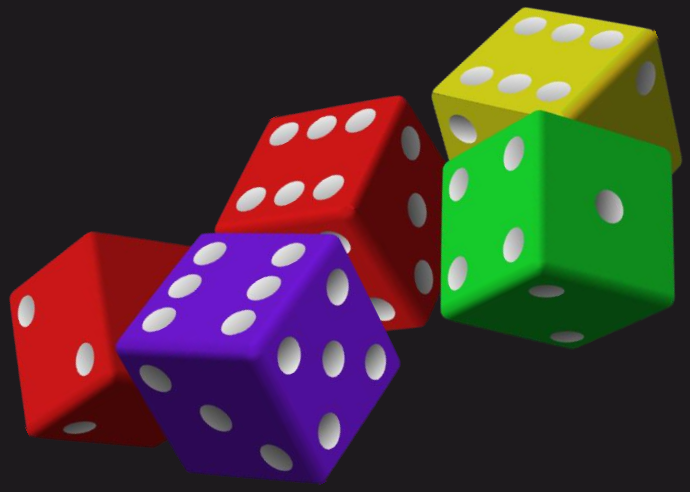

BUILDING FACT FLUENCY WITH GAMES AT HOME

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Fact Fluency

Principles and Standards for School Mathematics, published by NCTM, states, "Computational fluency refers to having efficient and accurate methods for computing. Students exhibit computational fluency when **they demonstrate *flexibility* in the computational methods they choose, *understand* and can explain these methods, and produce accurate answers *efficiently*.** The computational methods that a student uses should be based on mathematical ideas that the student understands well, including the structure of the base-ten number system, properties of multiplication and division, and number relationships" (p. 152).

MORE RESEARCH

"…research evidence points in one direction: The best way to develop fluency with numbers is to develop number sense and to work with numbers in different ways, not to blindly memorize without number sense."

~ Jo Boaler

Games for Families

Parent Workshops

Our parent workshops are held monthly and cover a variety of ways parents can support their students. Many families bring children of all ages with them to these events. It is quite the happening!

This last October our parents were introduced to our new curriculum by reenacting "A day in the life of a third grade math student."

The previous year we hosted a "Family Game Night" as a venue to share math games and talk about building fact fluency. Today we are going to share some of those games with you as well as a few games you might want to use in math centers.

Go Figure!

How to play:

- Shuffle and deal cards, one at a time to players until all cards have been dealt.
- Each player puts two of their cards face up on the table.
- The player with the highest sum (or lowest difference, highest product, etc…) wins both cards.
- In case of a tie, each player turns over a second card and add to the total for a new score.
- Player with no cards left wins OR the player with the highest sum of all their cards wins.

I Spy

- Shuffle the cards and arrange them face up in 4 rows of 13.
- Player one looks at the cards and finds two or more cards that are touching and mentally creates a math equation.
- She then challenges the next player by saying, "I spy two (or three cards with a sum of __", or "I spy two cards with a difference of __".
- The challenged player must then find all of the equations that match what player one is referencing and pick up those cards from the table.
- The next player issues their challenge.
- Play continues until all of the cards are picked up. The winner is the player with the most cards.

Give Me 10

- Remove all of the face cards.
- Shuffle the cards and place 12 cards face-up in a row between the players.
- Players take turns finding combinations of cards that add up to 10.
- When both players agree that no more tens are possible, the next 12 cards are placed face up on the table and play continues.

Variations: Older children may want to race to see who can find the combinations equaling 10 the fastest. The one with the most cards wins.

Number Family Rummy

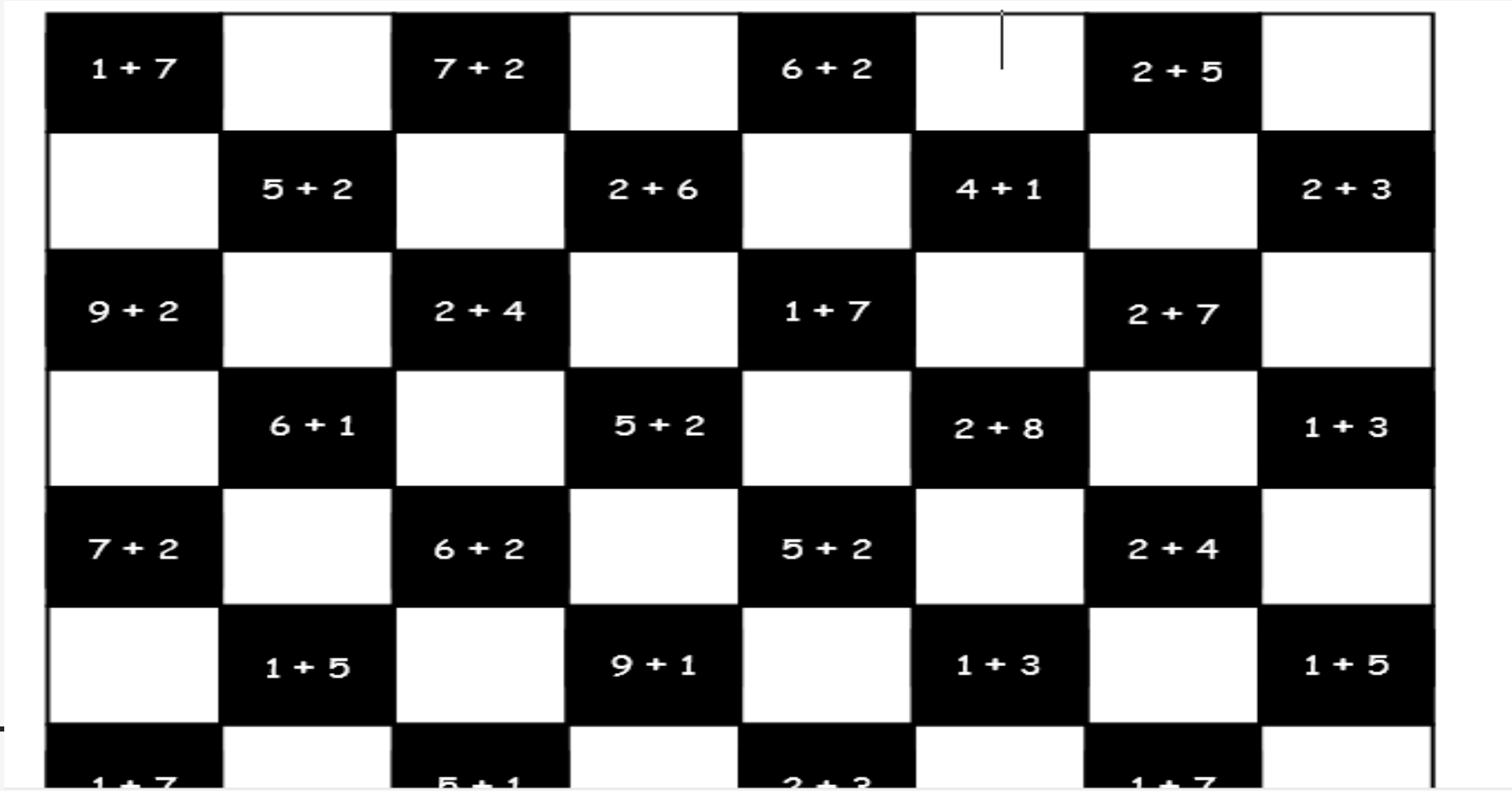
The goal of the game is to make fact families of three cards that are related by addition or subtraction.

For example: 5, 5, and 10 are a family because 5+5=10 and 10-5=5. 6,3 and 9 are a family because 6+3=9, 9-6=3 and 9-3=6.

- Remove the face cards from the deck.
- Shuffle the cards and deal 6 cards one at a time to each player.
- Place the remaining cards face down in a stack.
- Players take turns drawing a card and trying to make a fact family.
- You must discard a card on each turn.
- When you make a fact family, lay it on the table.
- The first player to make 2 fact families is the winner.

Math Checkers

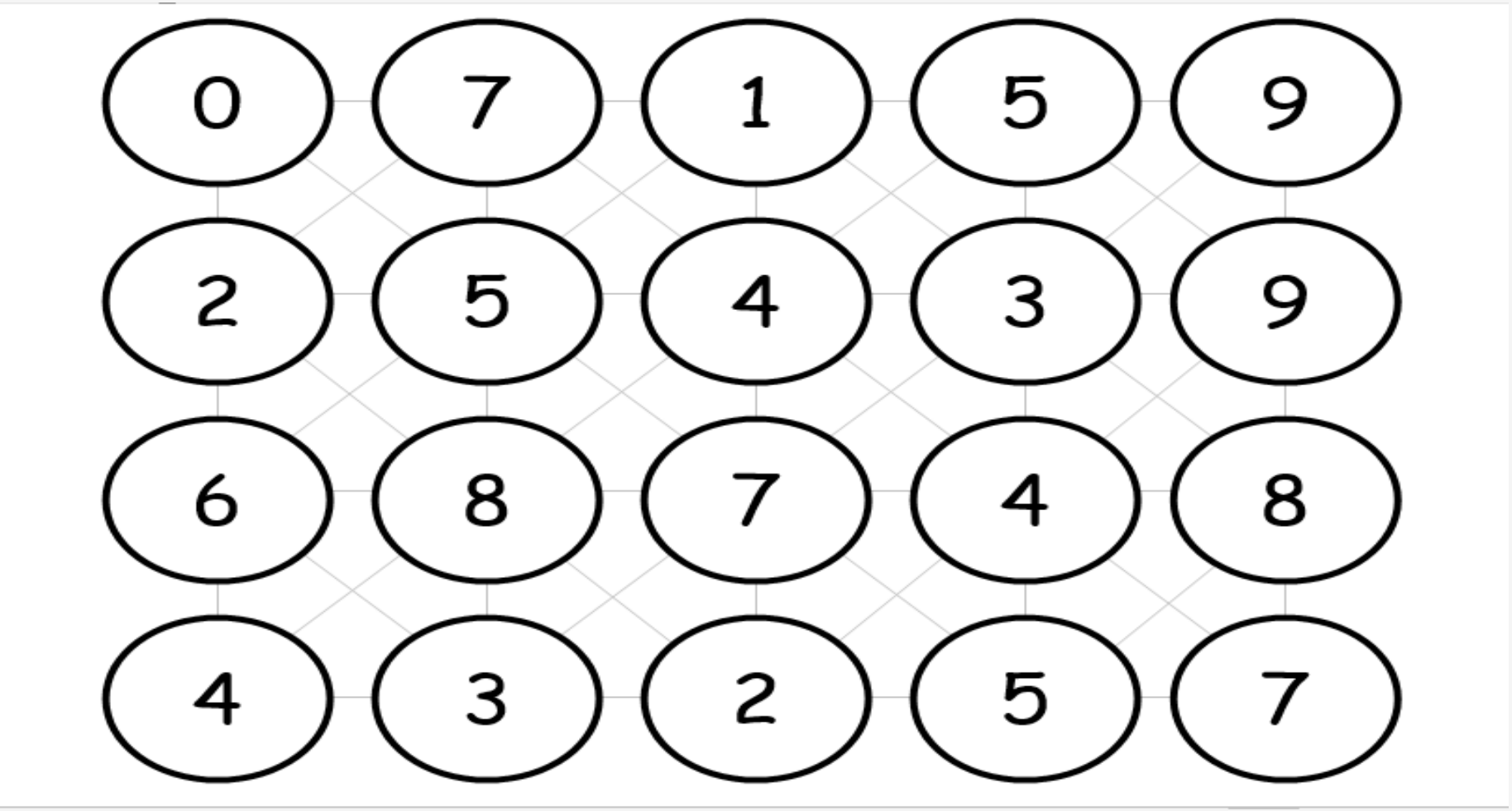
- *Math Checkers* is played like regular checkers.
- For a player to move to an open space, he or she must first tell the sum of that fact.



Games for Centers

Three in a Row

- Pull a subtracting 10 fact card or a missing addend card
- Put a marker on a number that matches your difference
- The first player to get three in a row wins



Find Ten

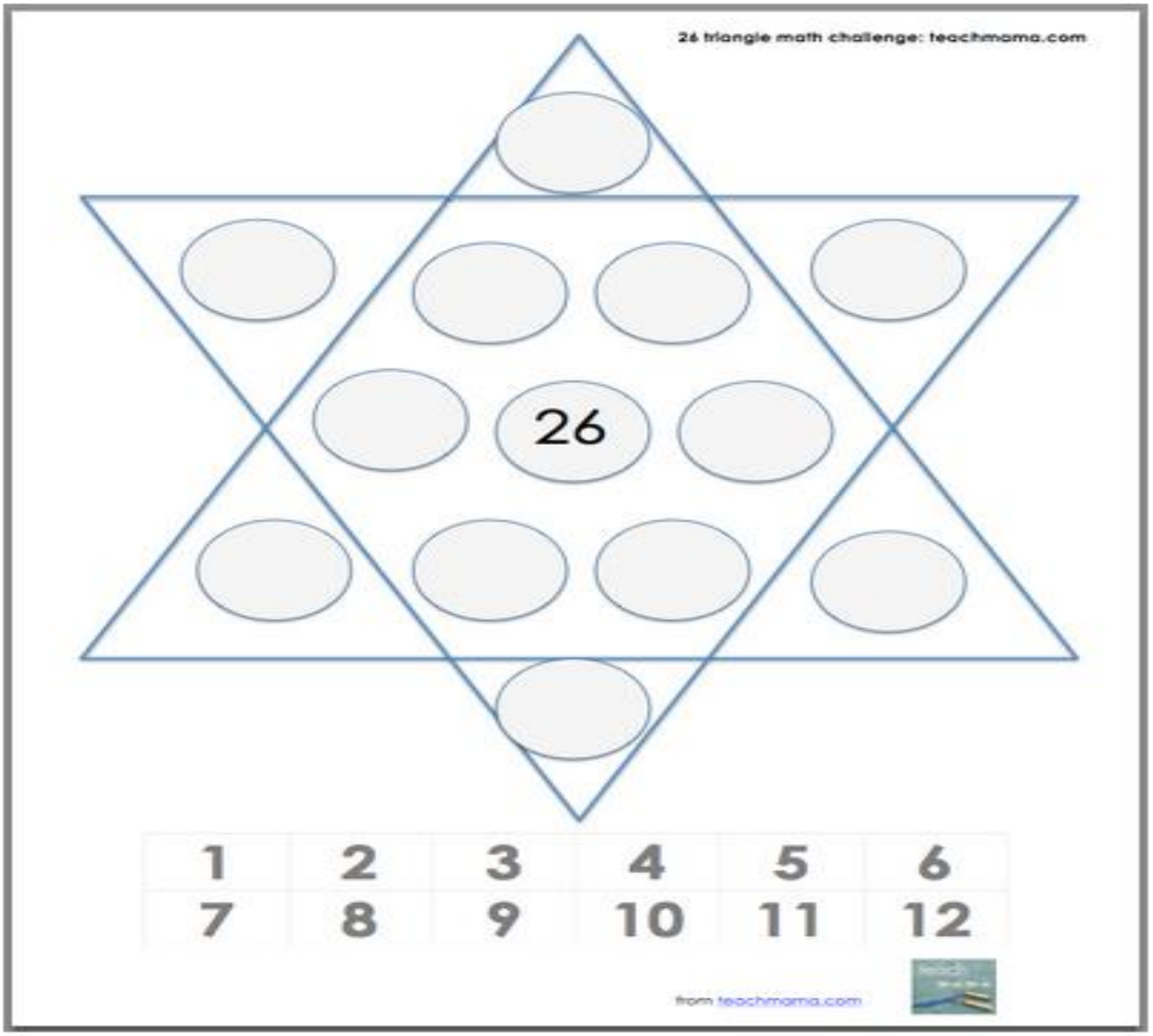
Materials: One two-color counter, one red and one yellow pencil **Number of Players:** 2

Directions: Player 1 is red. Player 2 is yellow. Take turns to toss a two-color counter. If your color comes up when you toss, find two numbers on the grid that equal 10 and color them. Write the addition fact. Keep taking turns until all pairs of numbers that equal 10 have been found. Count to see who recorded the most facts of 10.

Player 1

1	9	3	7	6
2	4	9	5	4
8	4	1	5	6
0	6	2	8	5
10	4	7	3	5

Player 2


26 triangle math challenge: teachmama.com
26
1 2 3 4 5 6
7 8 9 10 11 12
from teachmama.com

Squares

Directions:
1.The player who spins the highest number goes first.
2.Players take turns spinning the spinner and adding.
3.They find a space on the board with that sum and place their counter or chip on it.
4.The first player to make a square (see below wins.

7	13	9	8	5	11
17	3	17	15	13	8
13	9	11	8	7	15
7	15	5	13	17	9
8	9	17	7	3	17
13	11	15	17	15	11

11	8
5	13