Guess That Equation 1 (Game Board A)

Object of the Game

Welcome to Guess That Equation, the game show with a student as a contestant and an adult or older family member as a host. The host builds an equation with number cards, and the contestant guesses numbers to solve it. Can the contestant solve the equation before running out of game pieces?

Materials

- 1 set of Number Cards (4 each of the numbers 0–9)
  Print the cards or make your own.

- 1 Guess That Equation Game Board (Choose Game Board A, B, or C.)
  Download one of the printable Game Boards or make your own.

- 5 game pieces (coins, paper clips, buttons, or any other small household items)

- scratch paper

- pencil or pen

If you're unable to print or make number cards and a game board at this time, you can still play the game. See the last game variation in Change It Up at the end of this document for details.

Game Board A
addition/subtraction facts to 9
(Recommended for use early in Grade 1 or early in Grade 2.)

Game Board B
addition/subtraction facts to 18
(Recommended for use any time in Grade 1 or early in Grade 2.)

Game Board C
2-digit addition/subtraction
(Recommended for use late in Grade 1 or any time in Grade 2.)

Skills

This game helps us practice:

- Addition and subtraction facts (Game Boards A and B)

- Using the relationship between numbers in an equation to determine an unknown number

- 2-digit addition and 2-digit subtraction involving multiples of 10 (Game Board C)

How to Play

This game is best played with a child and an adult or older family member. The images below show gameplay using Game Board B.

1. Get ready to play the game.

    »   Have the adult role play a game show host and the child role-play a game show contestant. Pretend you're on TV as you play. It's okay to be silly!

    »   Consider adding some drama to your gameshow as you play.

        ¤   Each time the contestant guesses a number correctly, the host can make a bell sound and applaud. Each time the contestant loses a game piece, the host can make a buzzer sound.

        ¤   Play for prizes! You can use anything found at home as a prize.

2. Set up the game.

    »   Divide the Number Cards into 2 groups. The game show host gets three of each card 0–9.

    »   The host chooses number cards and places them on the top of the game board to make an addition equation. While the host makes the equation, the contestant closes their eyes. Here's a bit more guidance on the equation:

        ¤   The game show host places number cards on top of the game board to make an addition equation, 1 Number Card per box. While the host makes the equation, the contestant closes their eyes.

        ¤   Write the equation down on scratch paper to help remember it.

        ¤   The Number Cards in the equation are turned over so they are not visible.

        ¤   Make an equation that is appropriate for your game board.

        Game Board A: Use three 1-digit numbers. Try 5 + 4 = 9 or 3 + 4 = 7.

        Game Board B: Use two 1-digit numbers and a total from 10 to 18.
        Try 9 + 4 = 13 or 7 + 8 = 15.

        Game Board C: Use three 2-digit numbers in vertical format.
        Include some multiples of 10. Try 50 + 30 = 80 or 65 + 10 = 75.

» The contestant gets one of each card 0–9 and 5 game pieces.

¤ The contestant places the numbers cards face up in a line, in order from 0 to 9, and sets the 5 game pieces next to the cards.
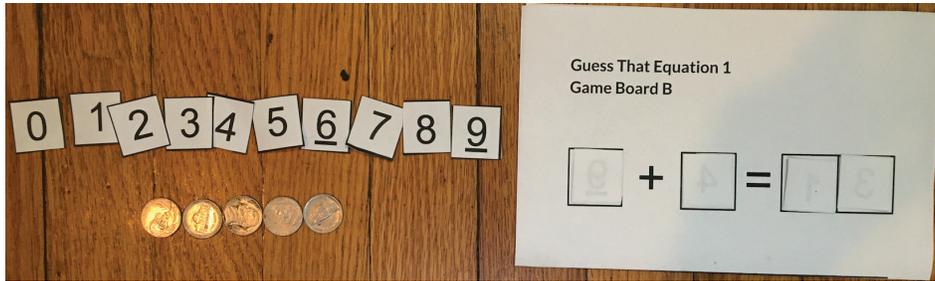

3. Start the game show by introducing the contestant. Invite the contestant to guess a number from 0 to 9 that might be in the equation and have them turn over that number card in their line of number cards to indicate the number that was guessed. For example, if the contestant guesses the number 4, they turn the number 4 card facedown.

» If the contestant guesses a number that is in the equation, the game show host turns the card(s) in the equation face up revealing the number everywhere it appears in the equation.

¤ If the number guessed is in the equation, the contestant gets to keep all of their game pieces.

¤ If the number guessed is not in the equation, the contestant loses 1 game piece.
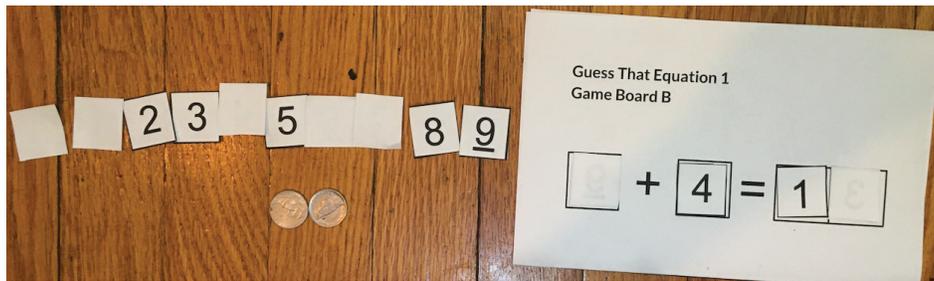
Hanh has the numbers 2, 3, 5, 8, and 9 available to guess. She says the first number in the equation has to be 8 or 9, because they are the only numbers left that can make a total of 10 or more. So, she'll guess 8 and 9 on her next turns.

4. Play continues until the contestant solves the equation by revealing all the numbers in it, correctly guesses the equation, or runs out of game pieces.

5. The contestant wins the game if they guess all the numbers in the equation before running out of game pieces.
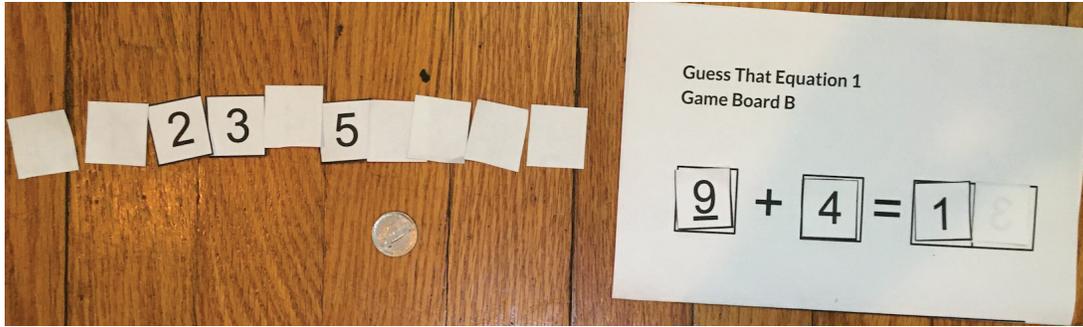
Host *Hanh has 1 unknown number left in the equation and only 1 game piece left to make a guess! What a close game!*

Hanh *I got it! It has to be 3 there, because 9 + 4 is 13!*

Host *[bell sound and applause] Ladies and gentlemen, we have a winner!*

6. Play again using the subtraction equation on the bottom of the game board.

   » *Game Board A:* Try 9 – 1 = 8 or 8 – 6 = 2.

   » *Game Board B:* Try 13 – 5 = 8 or 15 – 6 = 9.

   » *Game Board C:* Try 70 – 30 = 40 or 22 – 10 = 12.

Tips for Families

Before you play:

- Talk about the parts of an equation and what the +, –, and = signs mean.

- Practice building and reading some equations using number cards on the game board.

- Make sure the contestant understands it takes 2 number cards to make a 2-digit number. For example: the number cards 1 and 5 are used to show the number 15.

During the game, ask questions such as:

- *Why did you guess that number? Can you rule out any numbers?*

- *Would the equation be true or false if we put an 8 here? Why?*

- *There's only one 2-digit number in the equation. Do you think the number might start with 9? With 5? With 1? How do you know?*

Change It Up

Making even small changes to a game can invite new ways of thinking about the math. Try making one of the changes below. How did it change your strategy for winning the game?

- Write $1 on the back of some of the contestant's 0–9 number cards. Write $10 on the back of their other cards. Each time the contestant guesses a number correctly, they add that amount to their winnings. Find the total amount at the end of the game.

- Play with 1 game show host and 2–3 contestants who take turns guessing numbers. Which contestant will solve the equation first? If you choose to do this, you'll need a set of 0–9 number cards for each contestant.

- Write "EXTRA TURN" on the back of one of the contestant's 0–9 number cards. When they turn over that number card, they get an extra game piece!

- Write "LOSE A TURN" on the back of another number card, and take away a game piece when the contestant turns it over.

- At the start of each game, the host can announce an equation category, such as: "No Odd Numbers Here," "It's a Double," or "Greater Than 15."

- Allow the contestant to "buy a number" in the equation. At any time, they can choose to give up a game piece and request that a specific number card in the equation be revealed. (They cannot do this more than once per game.)

- Include a bonus round.

  » Let the contestant pick any 5 of their number cards all at once. Reveal those numbers if they're in the equation.

  » Give the contestant 30 seconds to call out any possible equation that might work. There's no penalty for guesses during the 30 seconds. Can they solve the equation before the time is up?

- Flip Game Board A upside down to play with equations that have the sum or difference before the = sign. Try these equations: 5 = 9 – 4 or 8 = 3 + 5.
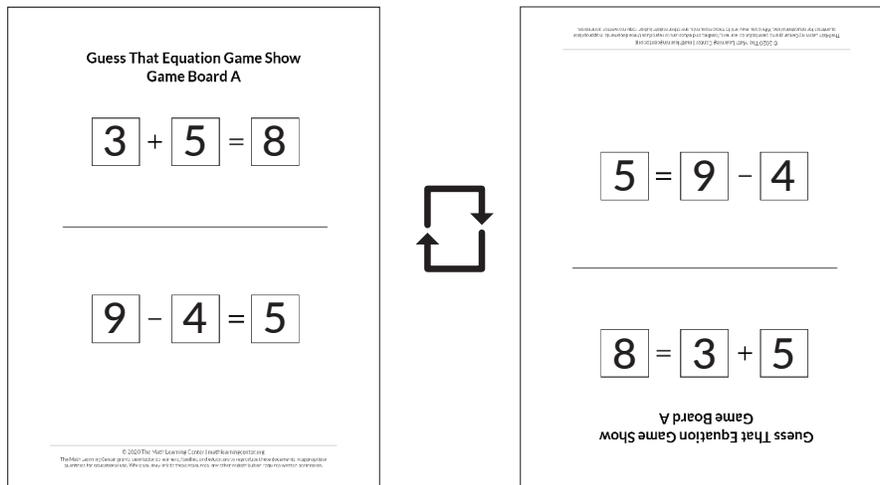
Game Board A can be used right-side up or upside down.

On the go? No problem. Play without a game board or number cards:

- Draw boxes on a sheet paper to show the unknown numbers in the equation.

- The host writes the numbers in the boxes as they are guessed correctly.

- The contestant keeps track of the numbers they've guessed by writing the numbers 0–9 on a separate sheet of paper and crossing them out as each is guessed.

Guess That Equation Game Show
Game Board A

$$\square + \square = \square$$

$$\square - \square = \square$$

Guess That Equation Game Show
Game Board B

☐ **+** ☐ **=** ☐☐

☐☐ **–** ☐ **=** ☐

Guess That Equation Game Show
Game Board C

$+$

$-$

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