

Logic Puzzles: Try to solve and make your own puzzles.

By Maria Ramirez

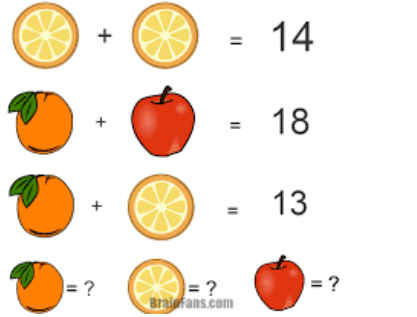
Level: All Grades

Concept: Problem Solving

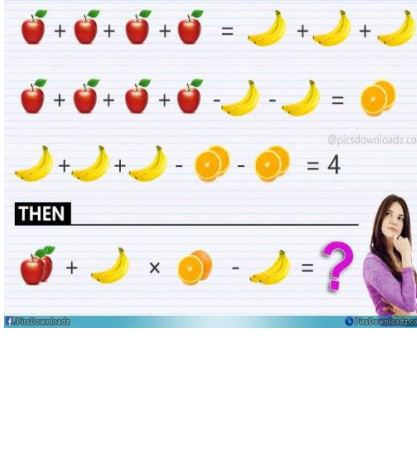
Introduction:

In math, we use logic to solve problems. We use clues to help us see patterns to understand the problems better. Let's see if we can solve some logic puzzles using clues.

Solving Examples:

	<p>Ask someone to share how they got their answer. Ask if anyone else gets the same answer using a different way?</p> <p>Answer:</p> <p>Orange slice = 7</p> <p>Whole orange = 6</p> <p>Apple = 12</p>
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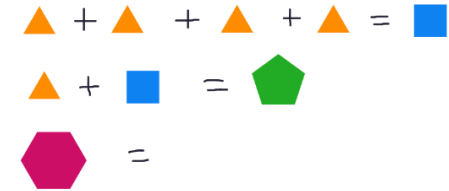
Retrieved from <https://brainfans.com/>

	<p>Ask someone to share how they got their answer. Ask if anyone else gets the same answer using a different way?</p> <p>Some may answer 18. Please ask them to look closely at the oranges and the bananas.</p> <p>Answer:</p> <p>Apple = 3, banana = 2x each banana, orange 2x each orange half</p> $2(3) + 2 \times 2 \times 2 \times 3 - 2 \times 3$ $6 + 24 - 6 = 24$
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Retrieved from: <https://www.pinterest.ca/pin/858639485178457565/>

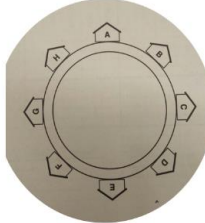
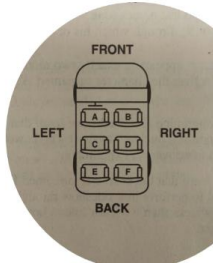
Making our own Puzzles

Go to <https://mathigon.org/polypad> and model how to make a puzzle

 <p> $4 \text{ triangles} + 1 \text{ square} = 1 \text{ pentagon}$ $1 \text{ triangle} + 1 \text{ square} = 1 \text{ pentagon}$ $1 \text{ hexagon} = 1 \text{ square}$ </p>	<p>Try to guess what a hexagon is equal to using triangles, squares and pentagons.</p> <p>There could be many possible answers.</p>
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Extension Word Puzzles

Logic puzzles can also be word problems. Here are 3-word puzzles that you can try after the session:

 <p>ROUND TOWN</p> <p>A little town has only one thoroughfare: Circle Street, which traverses around a park. Eight buildings lie along the perimeter including a post office.</p> <p>LET'S GUESS WHAT THE BUILDINGS ARE, USING CLUES</p>	<ol style="list-style-type: none"> 1. Going counter-clockwise from the town hall (which is in position A) to the church, Circle Street passes the library and exactly two other buildings. 2. The shortest path along Round Road from the hardware store to the museum passes the church 3. The library (which is immediately counterclockwise from the grocery store) is directly across the park from the museum 4. The high school isn't directly across the park from the grocery store
<p>SUPER CARPOOLERS</p> <p>Many superheroes can't fly. Six superheroes, each of whom has a superhero name and a different secret identity with a first and last name, carpool in a minivan to the crime scene to restore justice and keep the peace.</p> <p>Guess where each one sits.</p> 	<ol style="list-style-type: none"> 1. One superhero's secret identity first name is Calista and one surname is Lewen. One superhero is Silhouette. 2. Denise shuttles her fellow heroes to and from crime scenes as the driver in seat A 3. The hero surnamed Garcia sits to the immediate left of Captain Canada (who is surnamed Nguyen) 4. Mosquito Man's secret identity is Bernard Islington. The incredible Bulk sits immediately behind Arthur but immediately in front of Erna Chan 5. Fred (who sits in front of at least one other superhero) isn't the hero surnamed Jones. Wonder Wombat sits to the immediate left of Ultrasonic

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