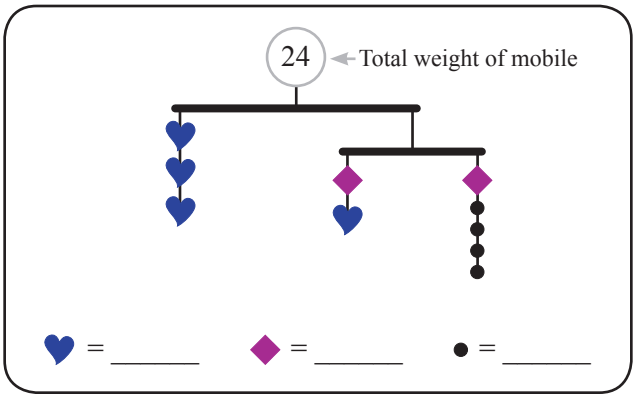
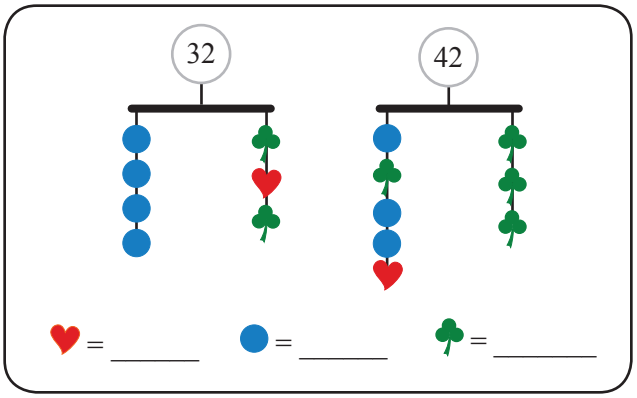
Transition to Algebra Puzzles & Activities

Mobiles

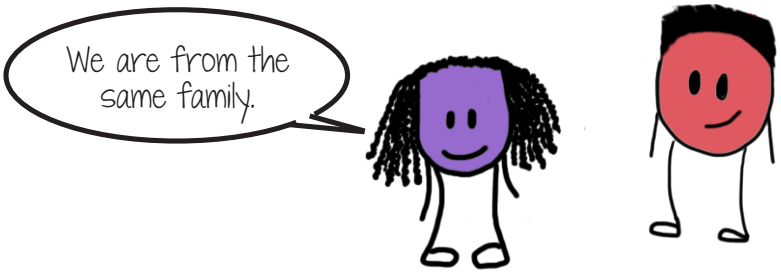




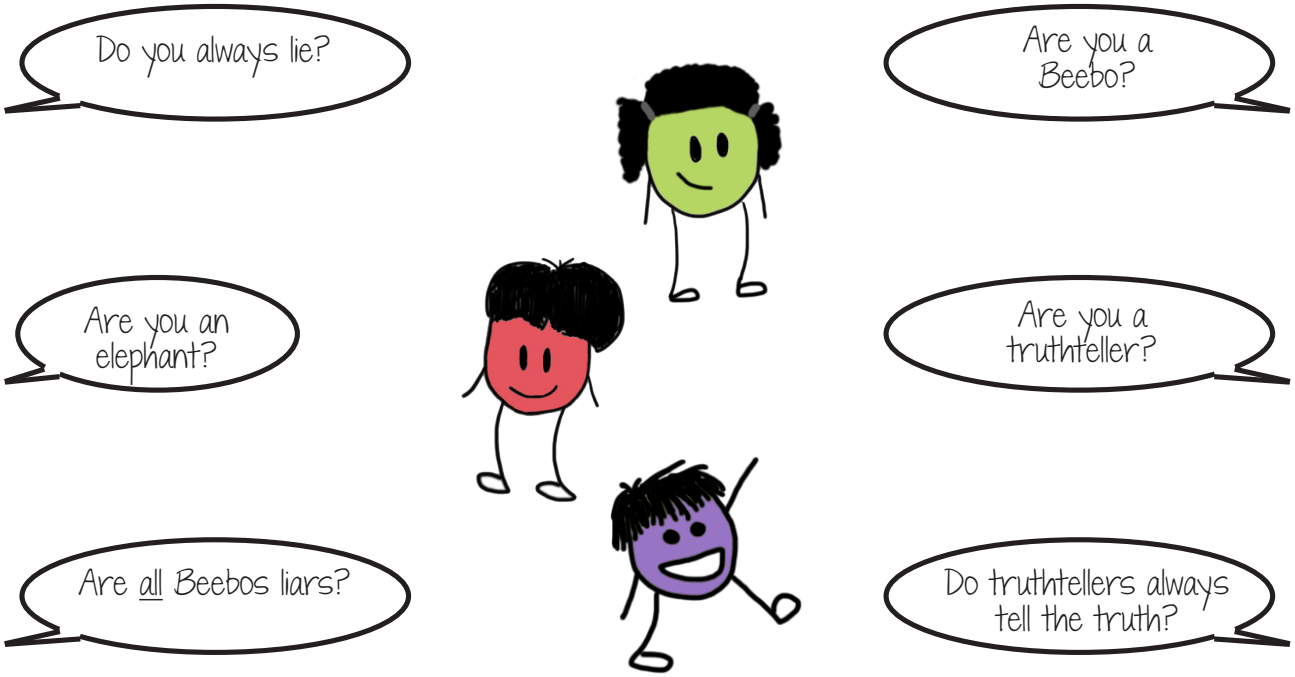
Liar/Truthteller Puzzles

Meet the Beebos! All Beebos come from one of two families: the Liars and the Truthtellers. Beebos from the Liar family always lie, and Beebos from the Truthteller family always tell the truth.

What can you say about these two Beebos?



Asking good questions. A *good question* to ask a Beebo is a question that liars and the truthtellers would answer differently because then you can tell them apart. Which of the following are *good* questions? Explain your reasoning.



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Tail-less Word Problems

Staywell Gym offers two fitness plans:

Plan A:	Plan B:
Pay a monthly fee of $20 plus $5 for each visit.	Pay a monthly fee of $40 with no extra cost for each visit.

Write three questions that make sense to ask about this situation.

Mystery Number Puzzles

What could ♥, 💧, and ☆ be if all the shapes are different numbers?

♥ • 💧 = 💧
💧 • 💧 = ☆
💧 + 💧 = ☆

♥ = _____
💧 = _____
☆ = _____

What could ●, 🍃, and ◇ be if all the shapes are different numbers?

🍃 • ◇ = ●
◇ + ◇ = ●
🍃 + 🍃 + 🍃 = ●

● = _____
🍃 = _____
◇ = _____

Who Am I? Puzzles

Who Am I? (*t* *u*)

- The product of my digits is 7.
- The sum of my digits is 8.
- My units digit is greater than my tens digit.

Who Am I? (*t* *u*)

- The product of my digits is 16.
- The sum of my digits is 8.

Who Am I? (*h* *t* *u*)

- I am odd.
- $u > t$
- My hundreds digit is prime.
- My tens digit is twice my hundreds digit.
- Two of my digits are square numbers.

You can make problems like these up using clues with relevant content.

Latin Squares and MysteryGrids

Use the clues to fill in each grid so every row and column contains all of the numbers in the title. In MysteryGrid puzzles, the numbers in each "cage" (heavy border area) should reach the target number using the given operation. For example, a 3-cell, "15, +" cage means you need to fill that cage with 3 numbers that add up to 15.

Diagonals can be the same.

3, 4, 5 Latin Square

		3
	4	

MysteryGrid $\frac{1}{3}$**, 1, 3** Puzzle

$4\frac{2}{3}$, +		
	1	3, x
1, x		

MysteryGrid **1, 3, 5, 7** Puzzle

21, x	7, x		15, +
	25, x		
2, –			
12, +		3, ÷	