



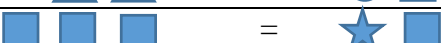




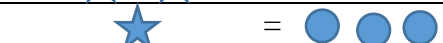

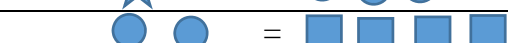
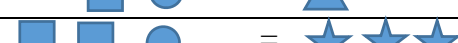



Practice with visual equations:

1. Given the balance equations below, figure out which shape is lightest and which is heaviest. Explain how you know:	2. Given the balance equations below, figure out which shape is lightest and which is heaviest. Explain how you know:
	
	
	
3. Given the balance equations below, figure out how much each shape weighs. Show how you know.	4. Given the balance equations below, figure out how much each shape weighs. Show how you know.
	
	
	
	

Solutions:

- It only takes 2 squares to make as much as 3 circles, so squares are heavier than circles. Two triangles makes the same as a lighter circle and heavier square, so the triangle must weigh somewhere in between a circle and a square. If 3 squares = a square and a star, then 2 squares = a star, so stars must be heavier than squares. Circle is lightest, star is heaviest.
- If 3 circles = a circle and a square, then 2 circles = a square, and square is heavier than circle. Two circles = a square so if 2 circles and a triangle = a square and 2 stars, then a triangle = 2 stars. Triangle is heavier than stars. A star = 2 squares so a star is heavier than a square. The lightest is the circle, then the square, then the star and the heaviest is a triangle.
- If a circle = 2, then 5 circles = 10. 2 squares = 10, so a square = 5. A square plus a circle is 7, so a triangle is 7. 2 squares and a circle = 12. 3 stars = 12, so a star = 4.
- 2 stars = 12, so a star = 6. 3 circles = a star which is 6, so a circle = 2. 2 circles = 4, so 4 squares = 4, so a square = 1. A star and a square = 7, so a circle and a triangle = 7. A circle = 2, so a triangle = 5.