

# Substitution Puzzle



The three shapes below are each given a value.  
Each value is a whole number and is between 0 and 10.  
Use the clues below to determine each shape's value.

$$\text{Red Square} > \text{Yellow Pentagon} > \text{Green Hexagon}$$

$$\text{Red Square} + \text{Green Hexagon} = 12$$

$$\text{Yellow Pentagon} - \text{Green Hexagon} = 1$$

$$\text{Green Hexagon} + \text{Yellow Pentagon} = 7$$

$$\text{Red Square} = \text{-----} \quad \text{Yellow Pentagon} = \text{-----} \quad \text{Green Hexagon} = \text{-----}$$

Solve the following problems by replacing the shape with its value.  
This is called SUBSTITUTION

$$1. \text{Red Square} \times \text{Yellow Pentagon} + \text{Green Hexagon} = \text{-----}$$

$$2. \text{Yellow Pentagon} + \text{Green Hexagon} \times \text{Green Hexagon} = \text{-----}$$

$$3. \text{Green Hexagon} \times \text{Green Hexagon} - \text{Red Square} = \text{-----}$$

$$4. \text{Red Square} - \text{Yellow Pentagon} + \text{Green Hexagon} = \text{-----}$$

$$5. \text{Red Square} + \text{Yellow Pentagon} - \text{Green Hexagon} + \text{Red Square} - \text{Yellow Pentagon} = \text{-----}$$

$$6. \text{Black Pentagon} + \text{Green Hexagon} - \text{Green Hexagon} + \text{Green Hexagon} \times \text{Red Square} + \text{Black Pentagon} = \text{-----}$$

$$9. \text{Yellow Pentagon} \times \text{Green Hexagon} - \text{Green Hexagon} \times \text{Green Hexagon} = \text{-----}$$



Don't forget about the  
Order of Operation