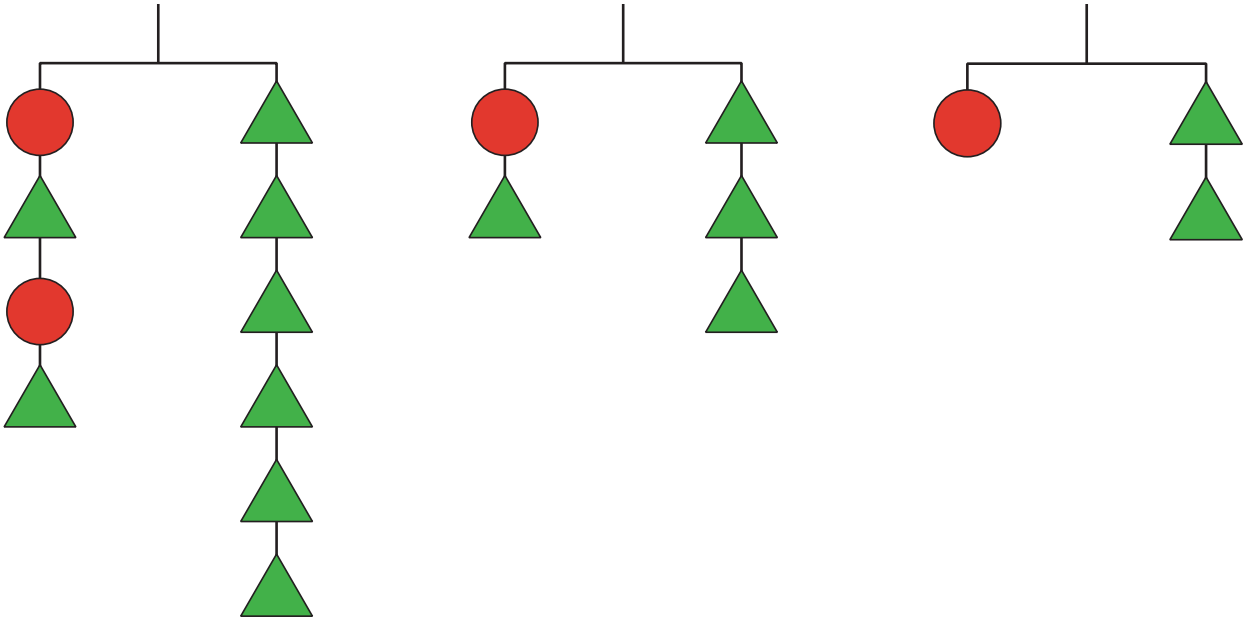
Unit 2 Lesson 6: Equality Diagrams

1 Notice and Wonder: Solving Equations (Warm up)

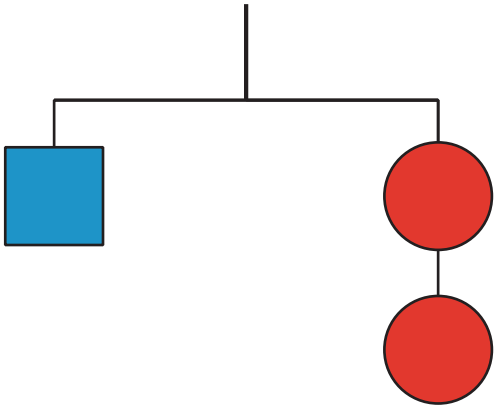
Student Task Statement

What do you notice? What do you wonder?

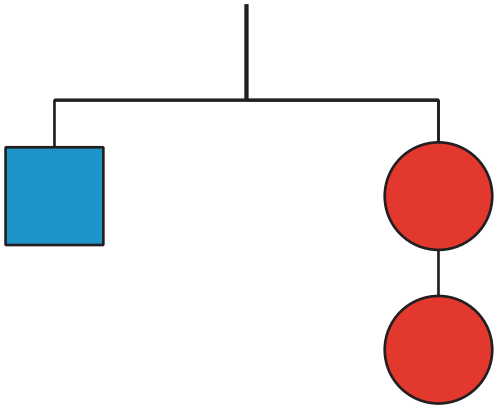


2 Hanger Diagrams

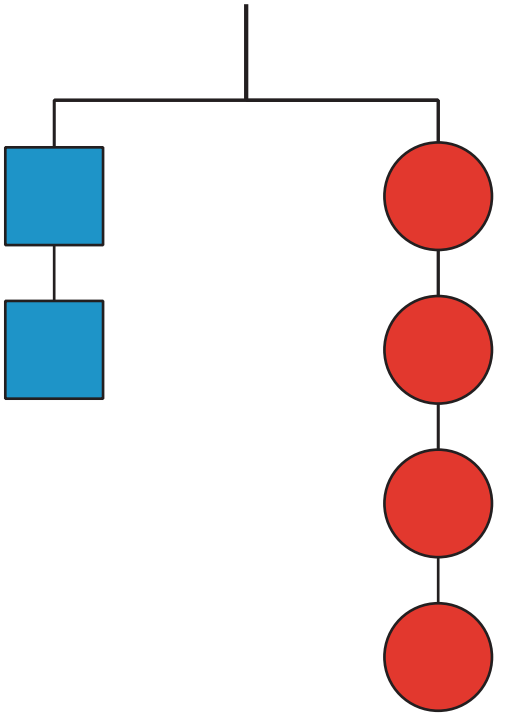
Images for Launch



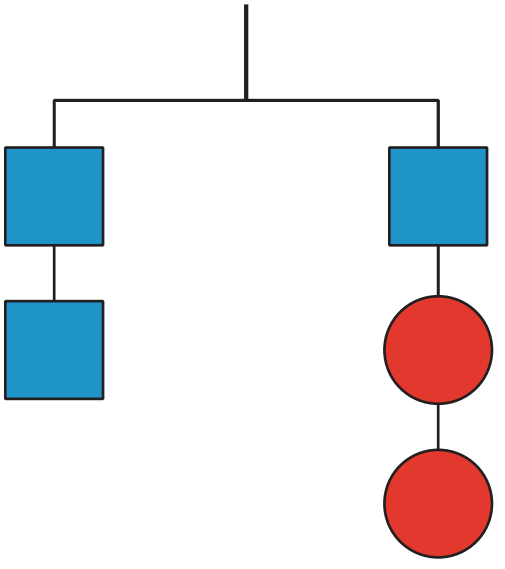
Student Task Statement



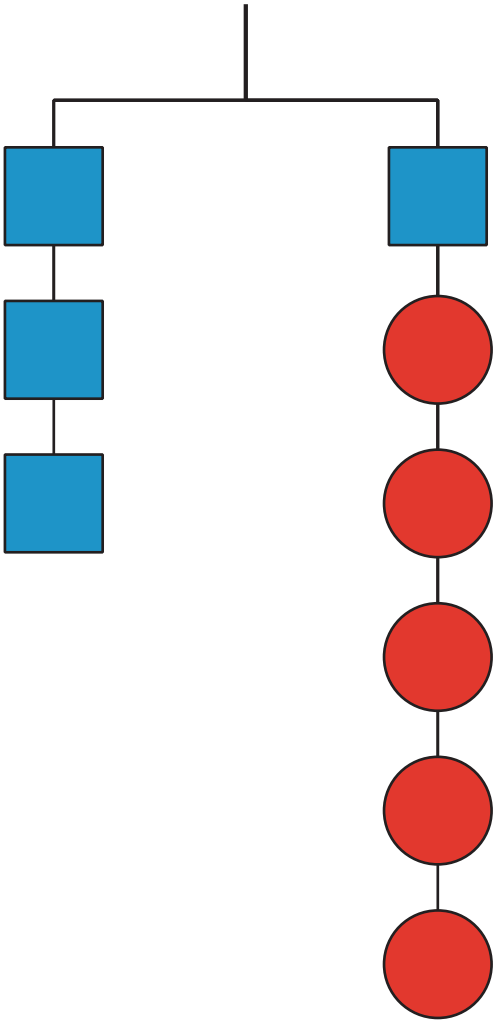
1. The hanger with 1 square and 2 circles is in balance.
   Which of these should also be in balance? Explain your reasoning.



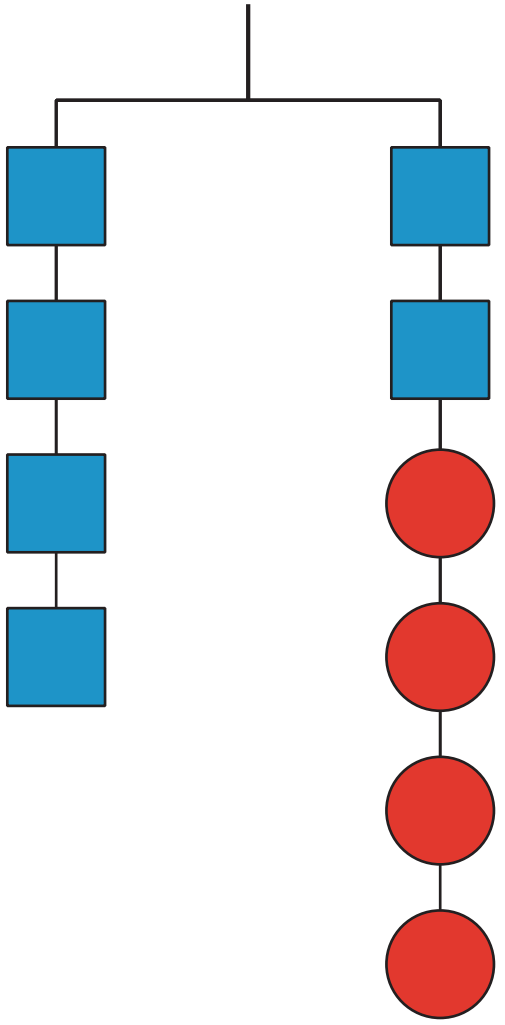
a.



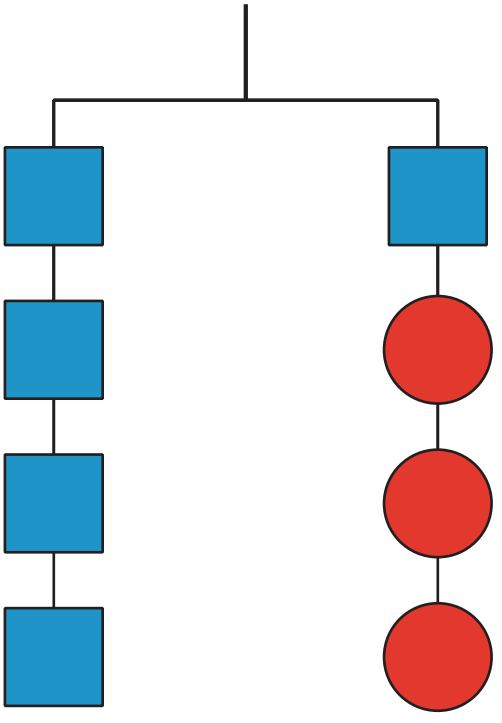
b.



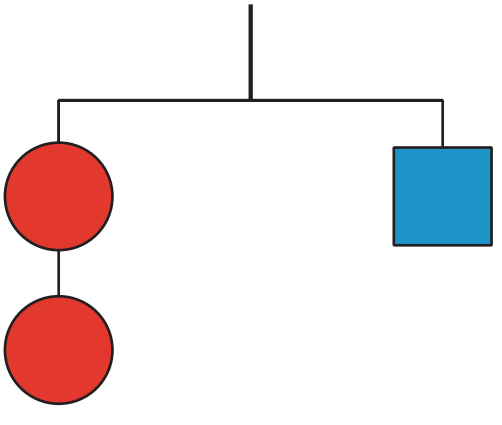
c.



d.

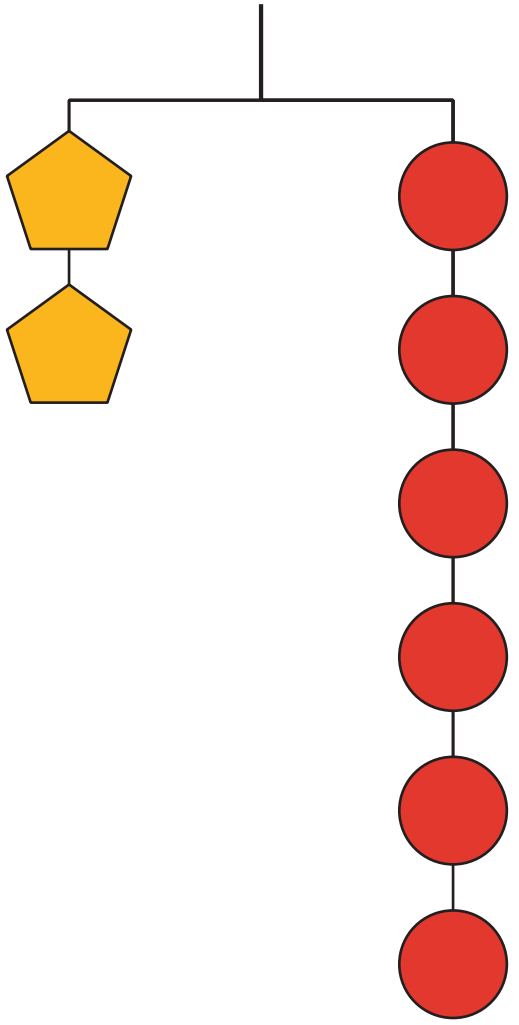


e.



f.

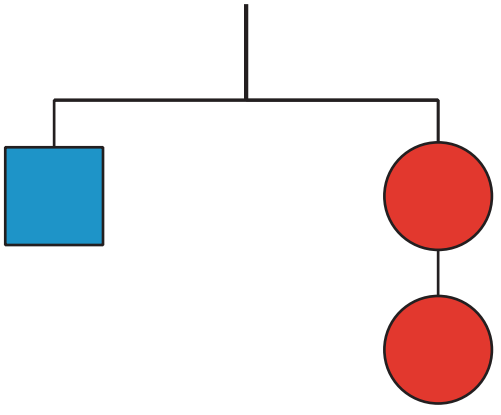
2. This hanger containing 2 pentagons and 6 circles is in balance. Use the hanger diagram to create two additional hangers that would be in balance.



3 Diagrams and Equations

Student Task Statement

In the previous activity, each square weighs 10 pounds and each circle weighs x pounds.



So, this diagram could be represented by the equation $10 = 2x$.

1. Use each of the 6 hanger diagrams containing squares and circles from the previous activity to write an equation that represents the weights on the hanger.
    a.
    b.
    c.
    d.
    e.
    f.

2. Solve each equation.
    a.
    b.
    c.
    d.
    e.
    f.

3. Compare the solutions to the equations with the answers from the previous activity. What do you notice?