

Unit 4 Lesson 3: Staying in Balance

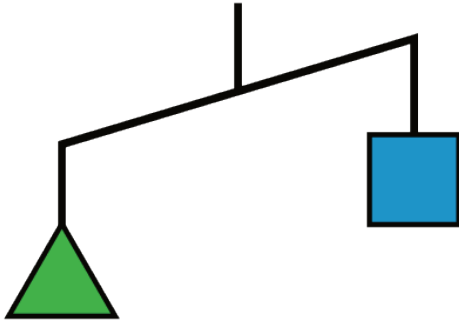
1 Hanging Around (Warm up)

Images for Launch

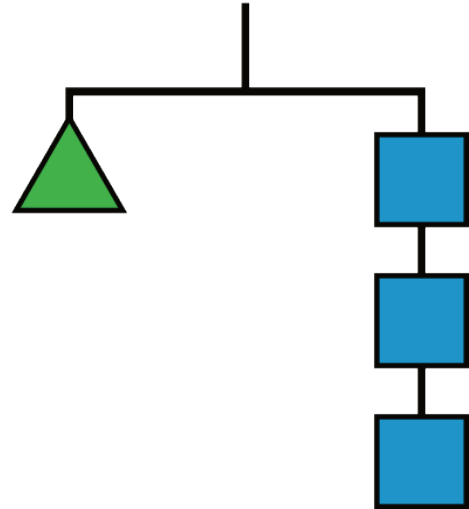


Student Task Statement

A



B



For diagram A, find:

1. One thing that *must* be true
2. One thing that *could* be true or false
3. One thing that *cannot possibly* be true

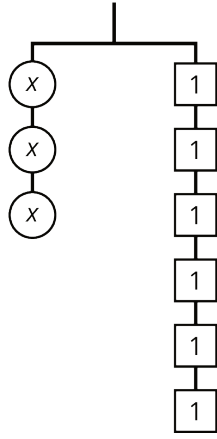
For diagram B, find:

1. One thing that *must* be true
2. One thing that *could* be true or false
3. One thing that *cannot possibly* be true

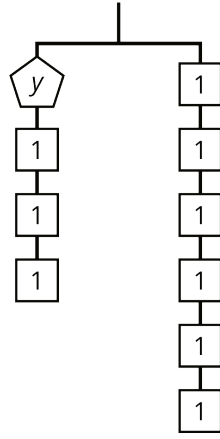
2 Match Equations and Hangers

Student Task Statement

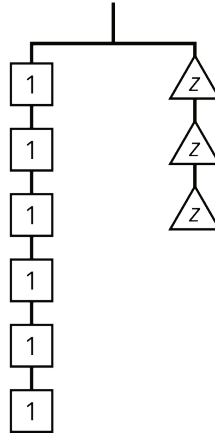
A



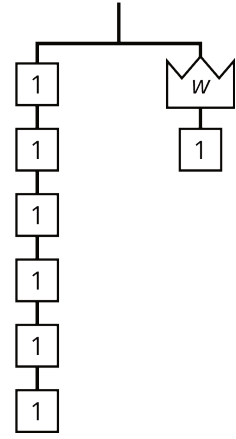
B



C



D



- Match each hanger to an equation. Complete the equation by writing x , y , z , or w in the empty box.

$$\square + 3 = 6$$

$$3 \cdot \square = 6$$

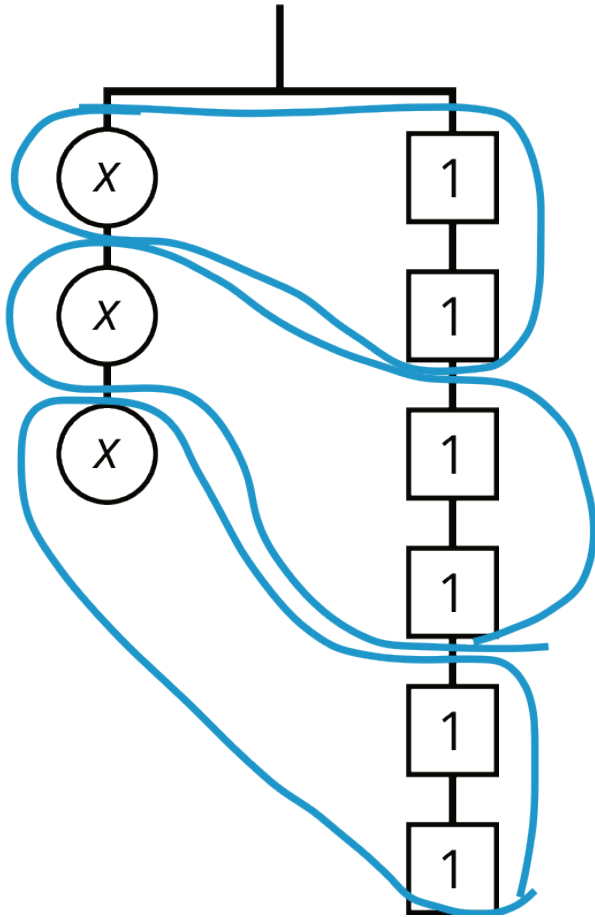
$$6 = \square + 1$$

$$6 = 3 \cdot \square$$

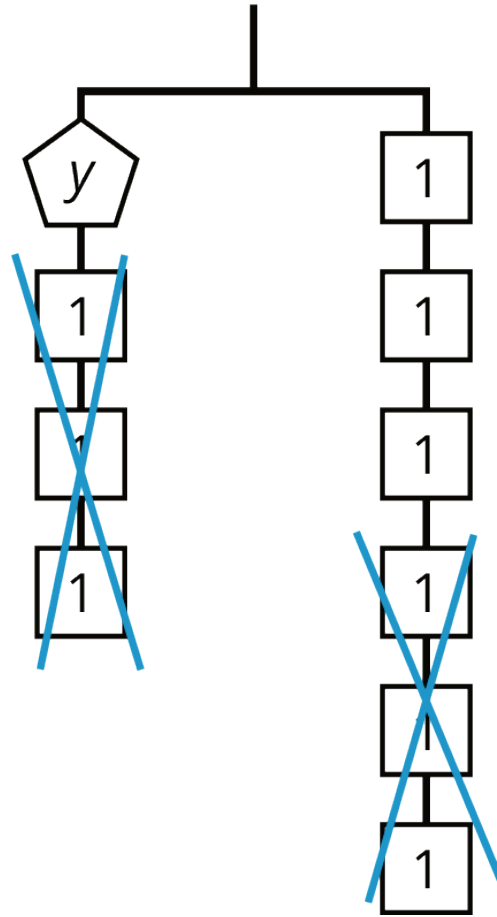
- Find a solution to each equation. Use the hangers to explain what each solution means.

Activity Synthesis

A



B

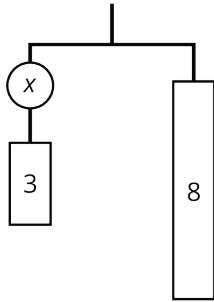


3 Connecting Diagrams to Equations and Solutions

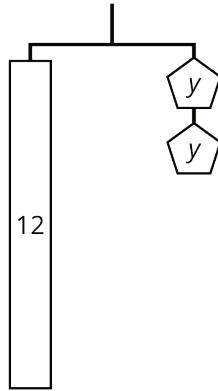
Student Task Statement

Here are some balanced hangers. Each piece is labeled with its weight.

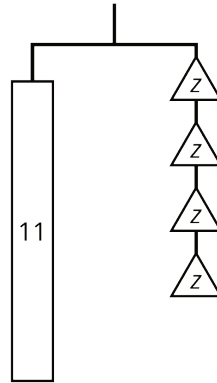
A



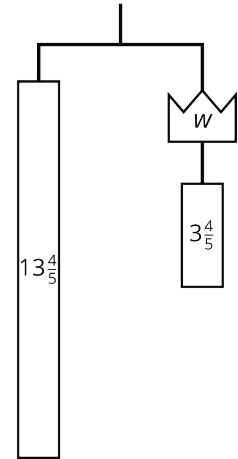
B



C



D



For each diagram:

1. Write an equation.
2. Explain how to reason with the *diagram* to find the weight of a piece with a letter.
3. Explain how to reason with the *equation* to find the weight of a piece with a letter.