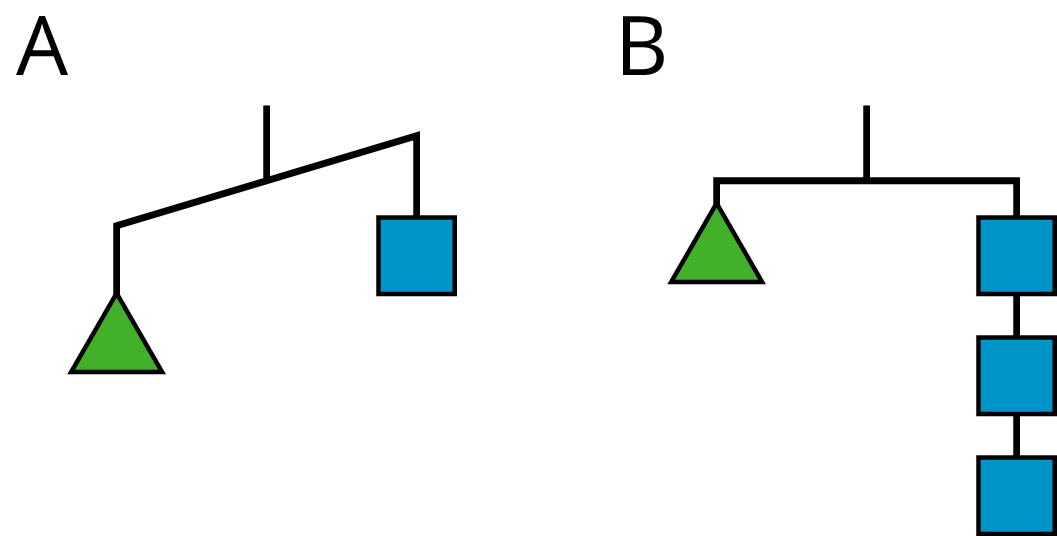
## Unit 4 Lesson 3: Staying in Balance

### 1 Hanging Around (Warm up)

#### Images for Launch



#### Student Task Statement



For diagram A, find:

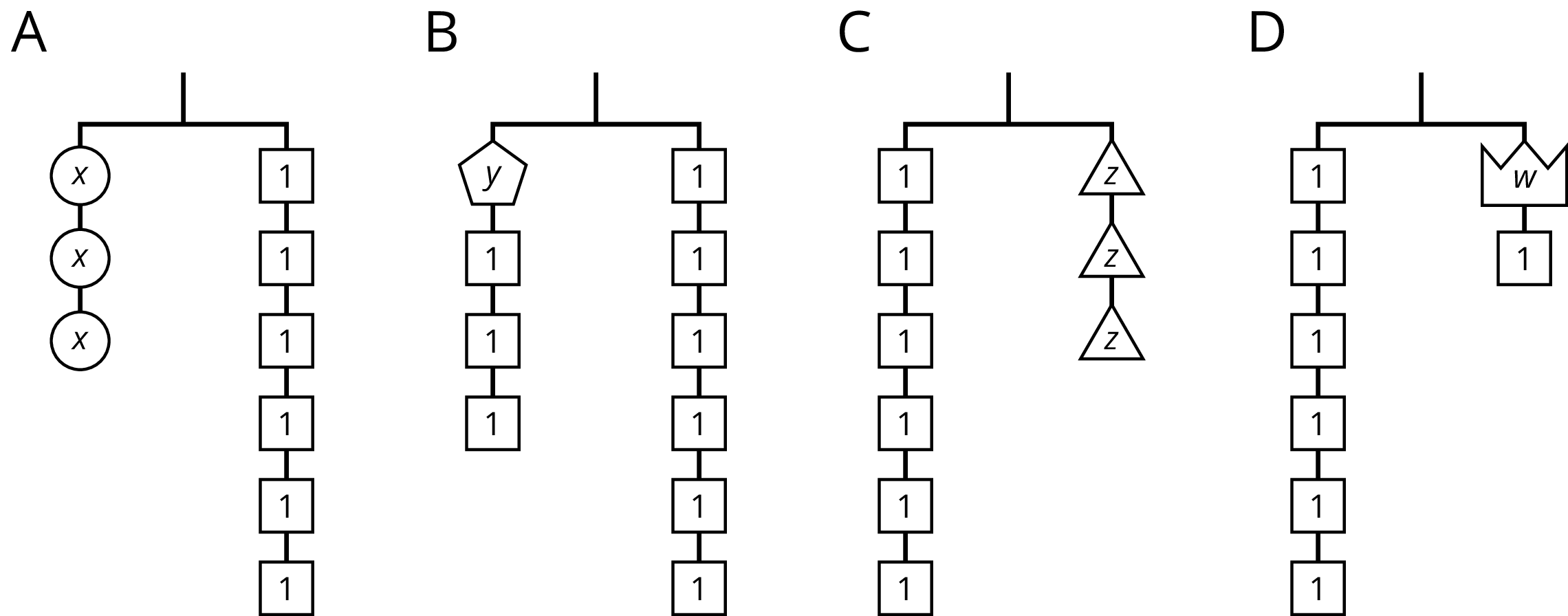
1. One thing that *must* be true
2. One thing that *could* be true or false
3. One thing that *cannot possibly* be true

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

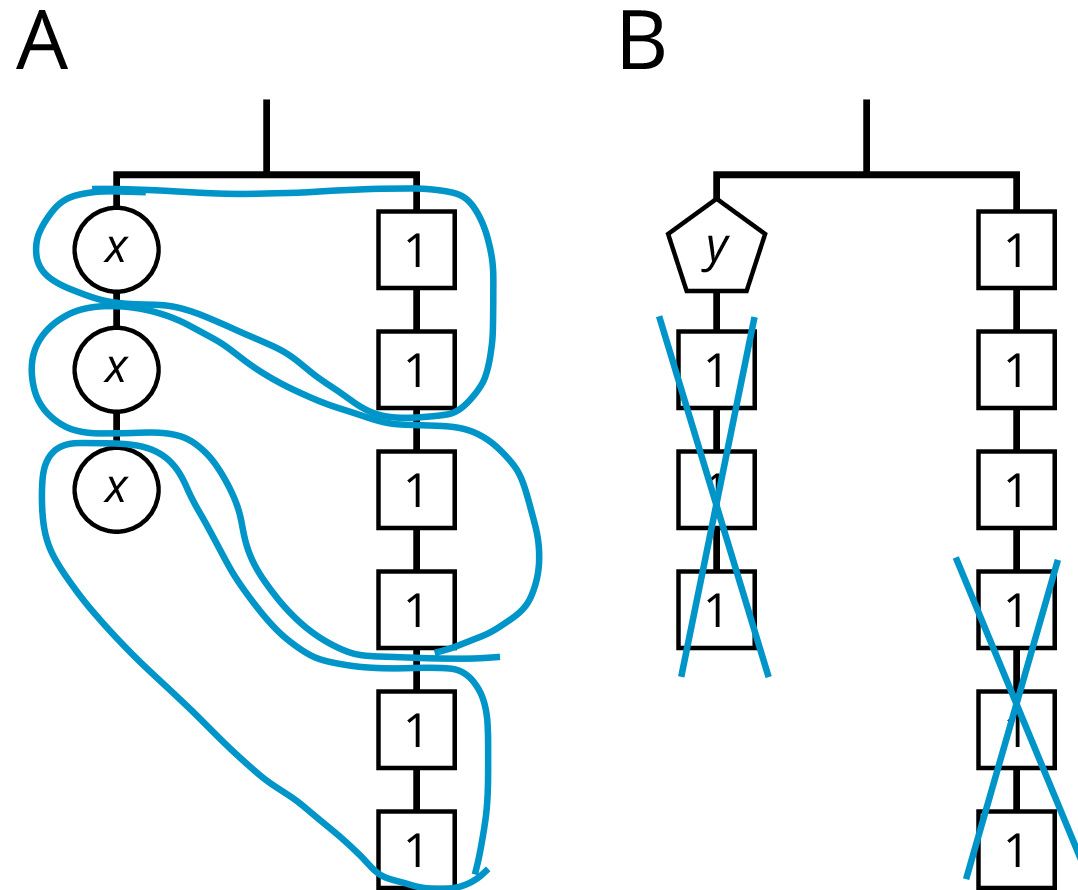
### 2 Match Equations and Hangers

#### Student Task Statement



1. Match each hanger to an equation. Complete the equation by writing , , , or in the empty box.
2. ​​Find a solution to each equation. Use the hangers to explain what each solution means.

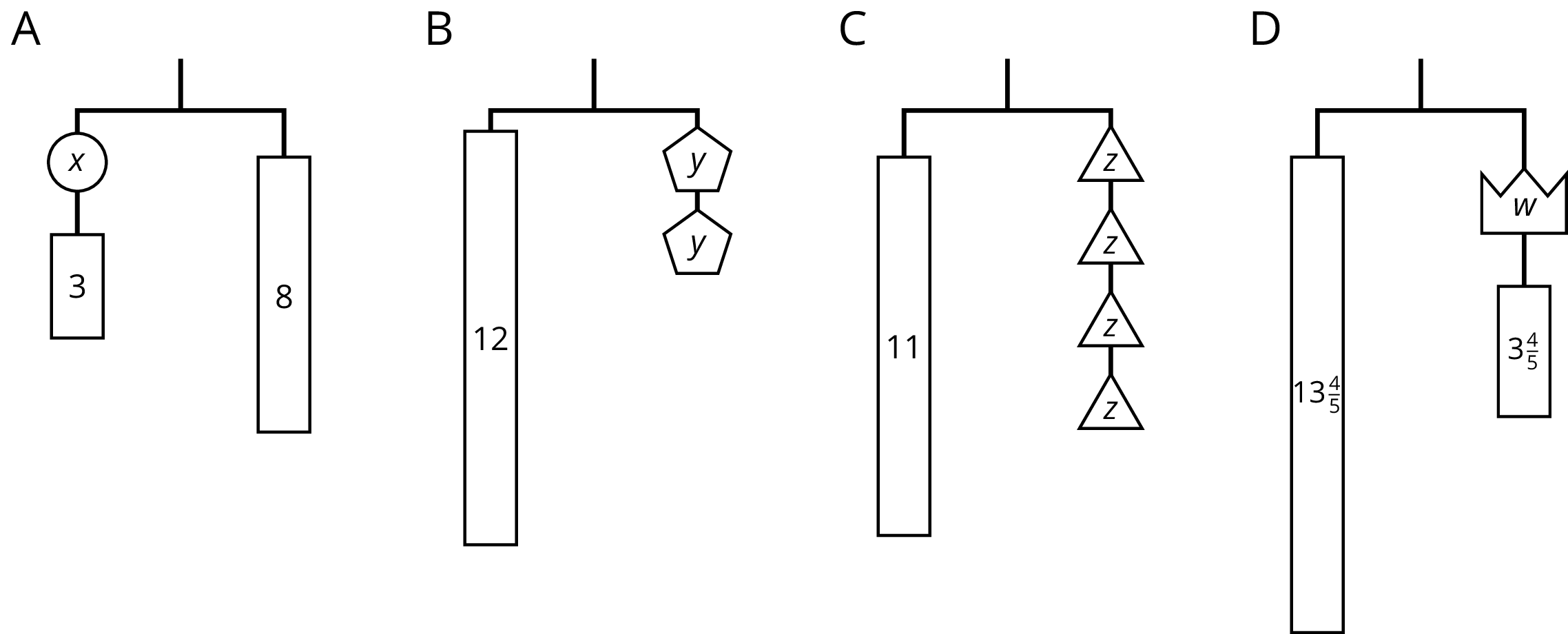
#### Activity Synthesis



### 3 Connecting Diagrams to Equations and Solutions

#### Student Task Statement

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



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.



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