Unit 6 Lesson 8: Reasoning about Solving Equations (Part 2)

1 Equivalent to $2(x + 3)$ (Warm up)

Student Task Statement

Select **all** the expressions equivalent to $2(x + 3)$.

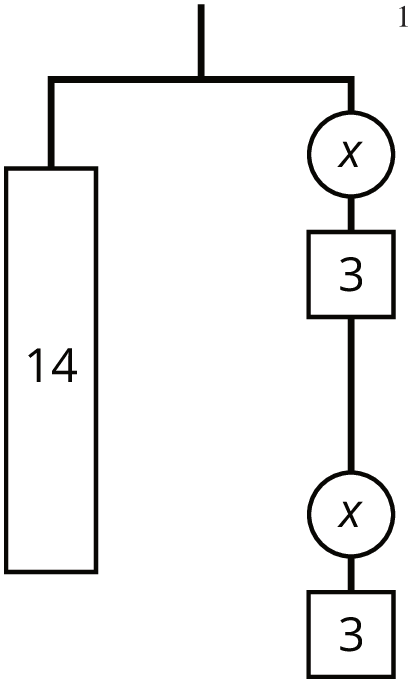
1. $2 \cdot (x + 3)$
2. $(x + 3)2$
3. $2 \cdot x + 2 \cdot 3$
4. $2 \cdot x + 3$
5. $(2 \cdot x) + 3$
6. $(2 + x)3$

2 Either Or

Student Task Statement

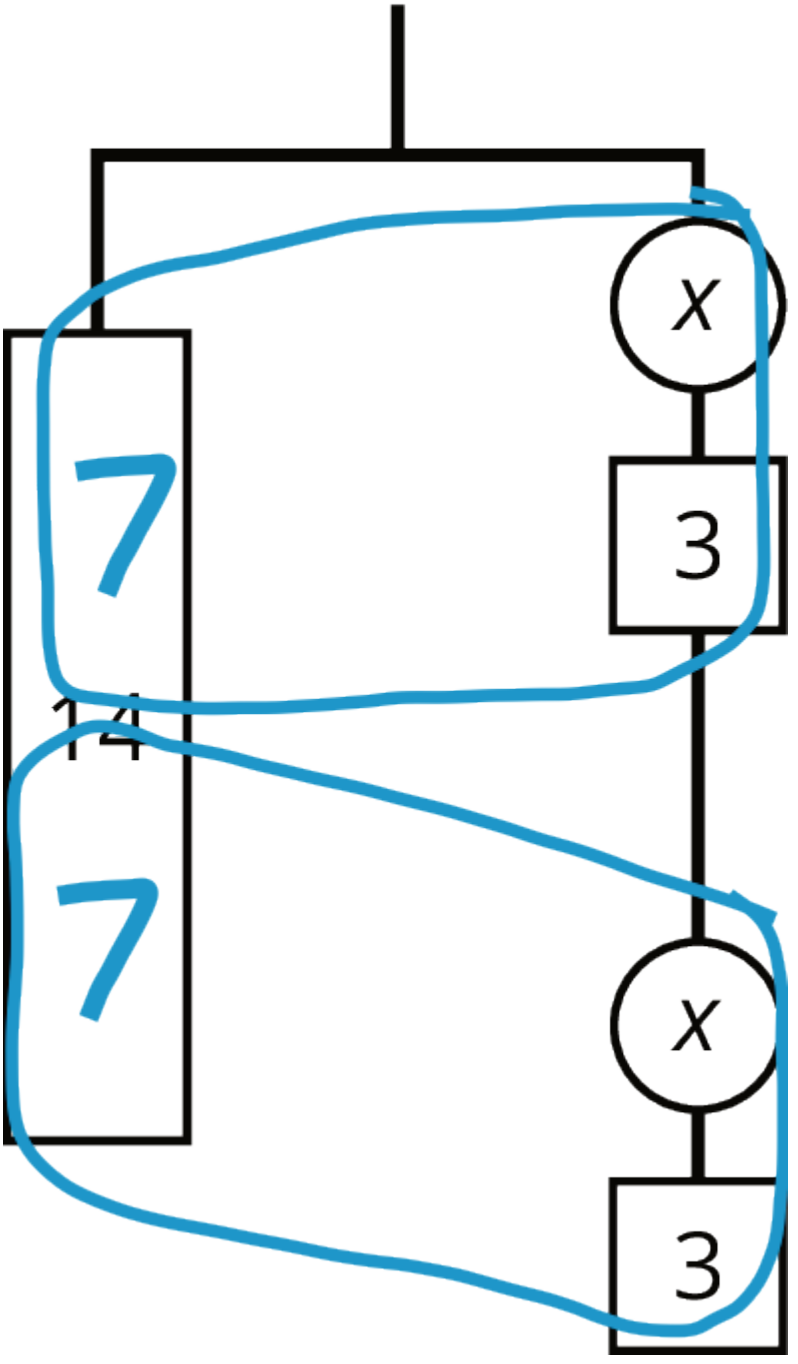
1. Explain why either of these equations could represent this hanger:

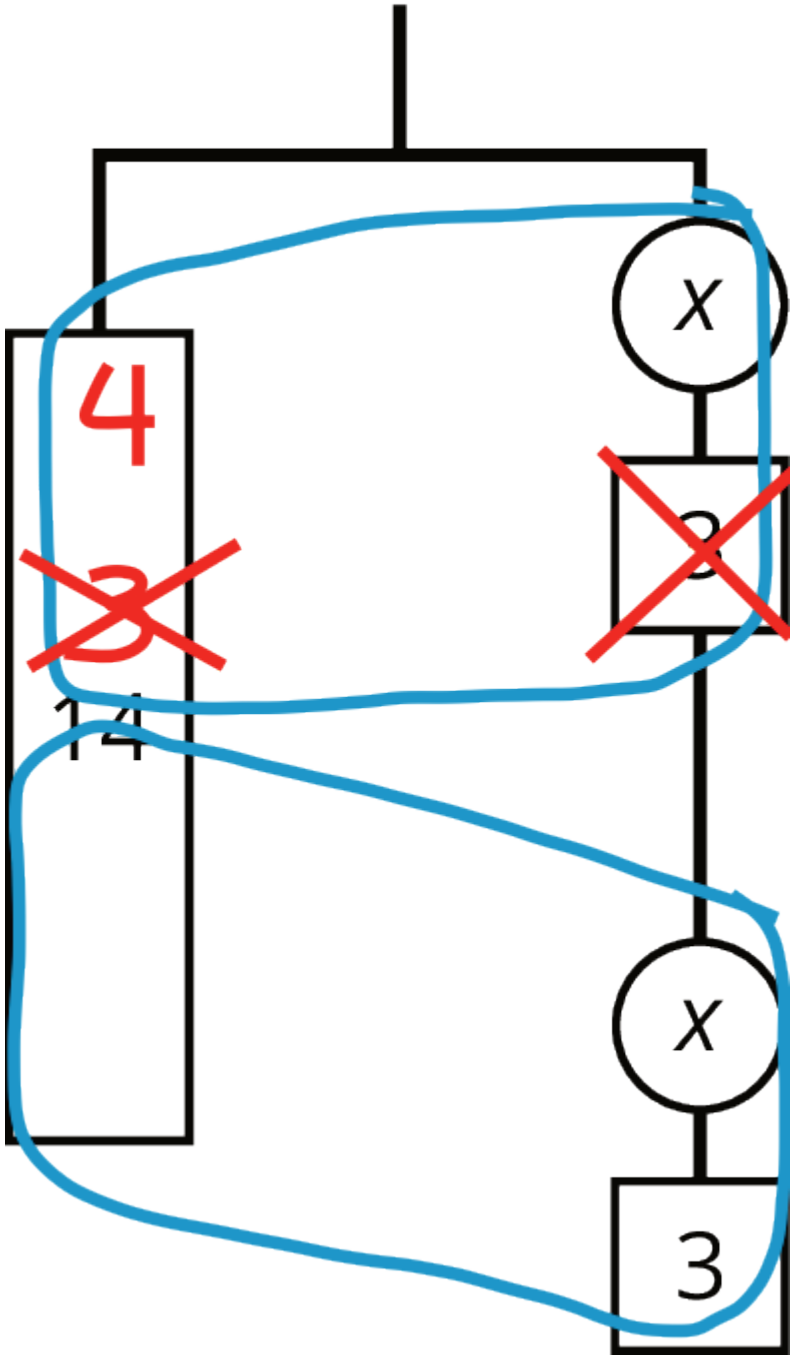
$14 = 2(x + 3)$ or $14 = 2x + 6$



2. Find the weight of one circle. Be prepared to explain your reasoning.

Activity Synthesis

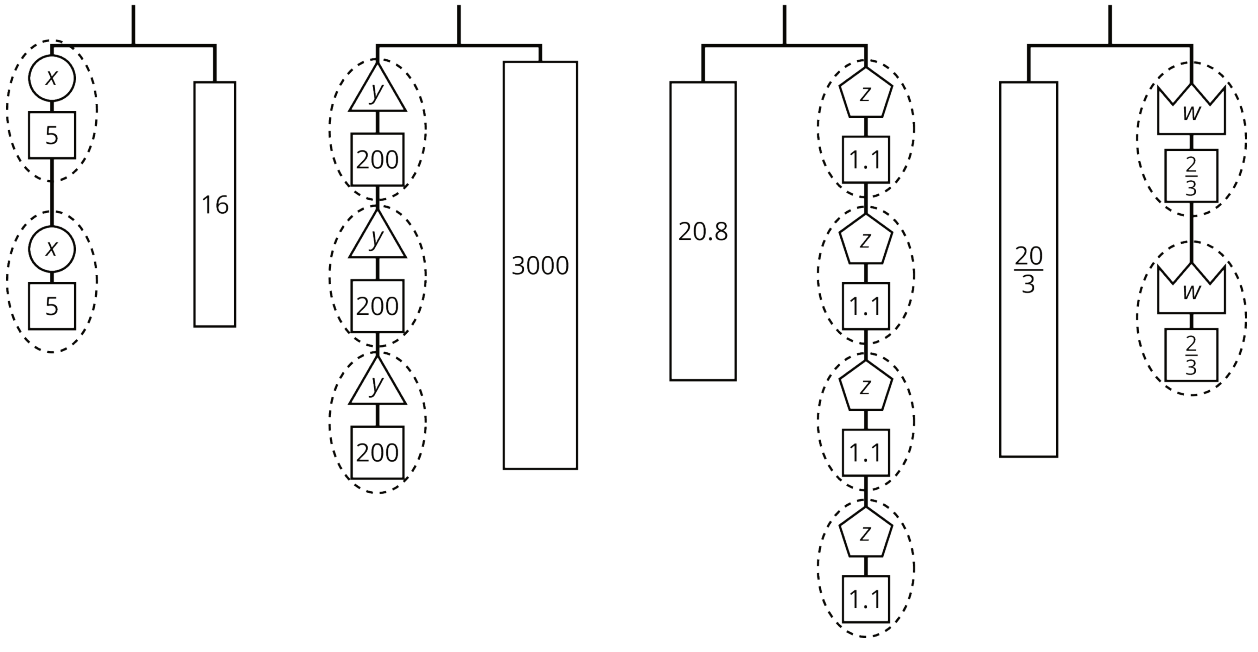



4
3
14
x
2
x
3

3 Use Hangers to Understand Equation Solving, Again

Student Task Statement

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



For each diagram:

1. Assign one of these equations to each hanger:
   $2(x + 5) = 16$ $3(y + 200) = 3{,}000$
   $20.8 = 4(z + 1.1)$ $\frac{20}{3} = 2\left(w + \frac{2}{3}\right)$

2. Explain how to figure out the weight of a piece labeled with a letter by reasoning about the diagram.

3. Explain how to figure out the weight of a piece labeled with a letter by reasoning about the equation.