

Key

NAME

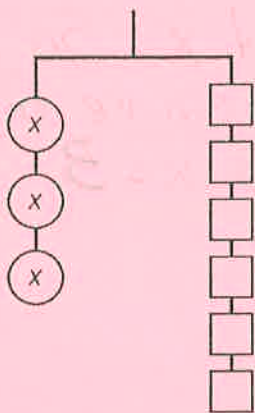
DATE

PERIOD

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Unit 6, Lesson 3: Staying in Balance

1. Select **all** the equations that represent the hanger.

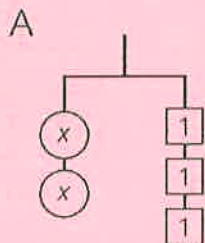


- A. $x + x + x = 1 + 1 + 1 + 1 + 1 + 1$
- B. $x \cdot x \cdot x = 6$
- C. $3x = 6$
- D. $x + 3 = 6$
- E. $x \cdot x \cdot x = 1 \cdot 1 \cdot 1 \cdot 1 \cdot 1 \cdot 1$

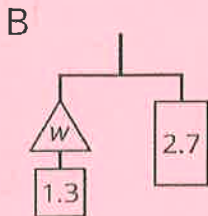
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$3x = 6$

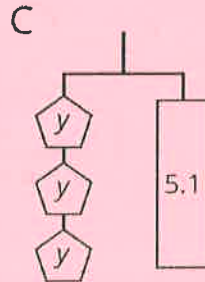
2. Write an equation to represent each hanger.



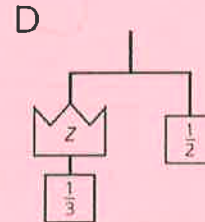
$2x = 3$



$1.3 + w = 2.7$



$3y = 5.1$



$\frac{1}{3} + z = \frac{1}{2}$

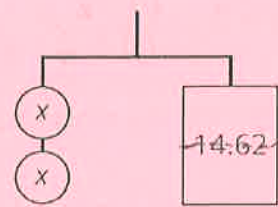
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3. a. Write an equation to represent the hanger.

$2x = 14.62$

b. Explain how to reason with the hanger to find the value of x .

There are 2 x 's which have same value as 14.62. So I need to divide 14.62 in half.



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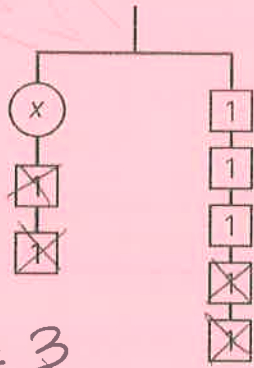
c. Explain how to reason with the equation to find the value of x .

I need to do $14.62 \div 2 = 7.31$

4. Andre says that x is 7 because he can move the two 1s with the x to the other side.

back

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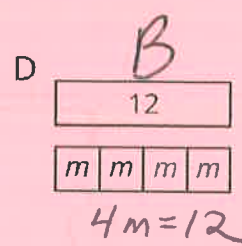
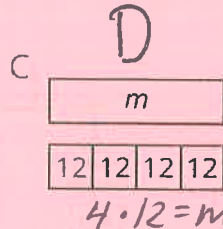
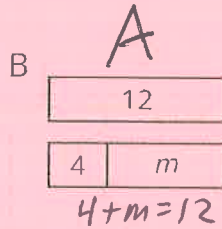
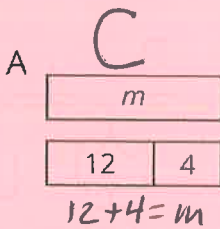
$x + 2 = 3$

Do you agree with Andre? Explain your reasoning.

No - I have to remove the 2 1's from the left balance to find x. So I also have to remove from right side so $x = 3$

5. Match each equation to one of the diagrams.

- a. $12 - m = 4$
- b. $12 = 4m$
- c. $m - 4 = 12$
- d. $\frac{m}{4} = 12$



(from Unit 6, Lesson 1)

6. The area of a rectangle is 14 square units. It has side lengths a and b . Given the following values for a , find b .

1. $a = 2\frac{1}{3}$ $14 = 2\frac{1}{3} \cdot b$
 $14 \div 2\frac{1}{3} = b$
 $14 \div \frac{7}{3} = b$
 $14 \cdot \frac{3}{7} = \frac{42}{7}$
 $b = 6$

2. $a = 4\frac{1}{5}$ $14 = 4\frac{1}{5} \cdot b$
 $14 \div 4\frac{1}{5} = b$
 $14 \div \frac{21}{5} = b$
 $\frac{14 \cdot 5}{21} = \frac{70}{21} = 3\frac{7}{21} = 3\frac{1}{3}$

3. $a = \frac{7}{6}$ $14 = \frac{7}{6} \cdot b$
 $14 \div \frac{7}{6} = b$
 $\frac{14 \times 6}{7} = \frac{84}{7} = 12$
 $b = 12$

7. Lin needs to save up \$20 for a new game. How much money does she have if she has saved the following percentages of her goal. Explain your reasoning.

a. 25% $\begin{array}{r} 20 \\ \times .25 \\ \hline 100 \\ 400 \\ \hline 5000 \end{array}$

b. 75% $\begin{array}{r} 20 \\ \times .75 \quad (2) \\ \hline 100 \\ 140 \\ \hline 1500 \end{array}$

c. 125% $\begin{array}{r} 1.25 \\ \times 20 \\ \hline 25.00 \end{array}$

(from Unit 3, Lesson 11)

$\begin{array}{r} 20 \\ \times .25 \quad (2) \\ \hline 100 \\ 400 \\ \hline 5000 \end{array}$