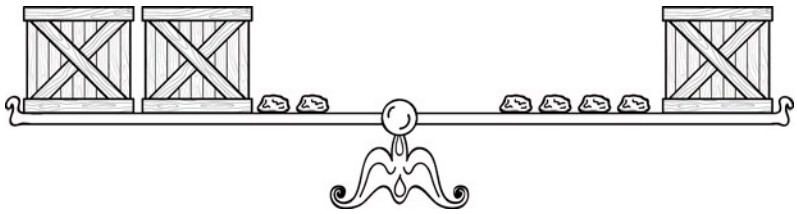
SE: Geology Rocks Equations

NAME _____

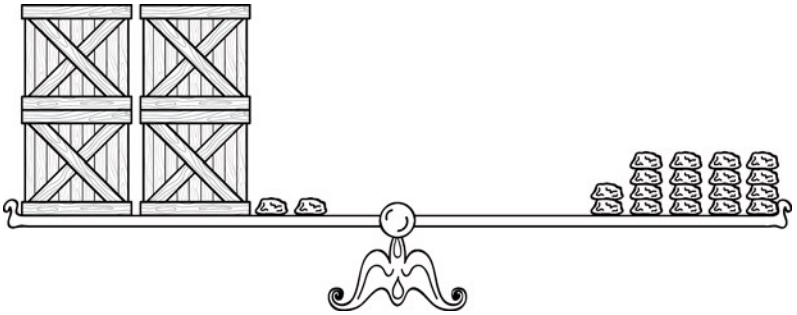
Mr. Anderson is a geologist and has a laboratory full of rocks. He knows that each rock weighs exactly one pound (+1), and he would like to figure out how many rocks are in each crate. To figure that out without opening the crates, Mr. Anderson places crates and rocks on a scale until they are balanced. Using his math skills, he is able to reason how many rocks are in each crate without having to look inside.

1. The following picture represents the first set of crates and rocks Mr. Anderson put on the balance. How many rocks are inside each crate?

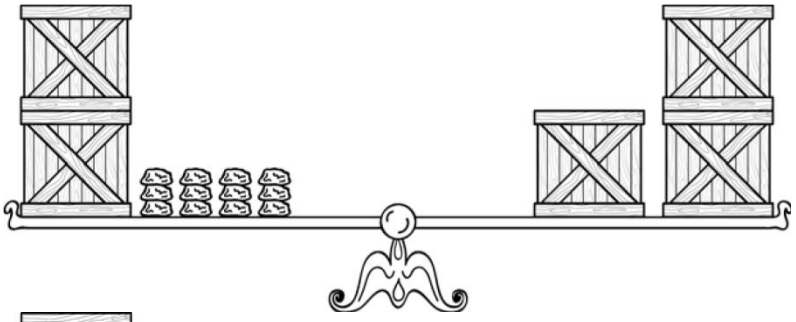


Mr. Anderson has made several picture representations on his clipboard of other combinations of crates and rocks that balanced. Can you figure out how many rocks are in each set of crates?

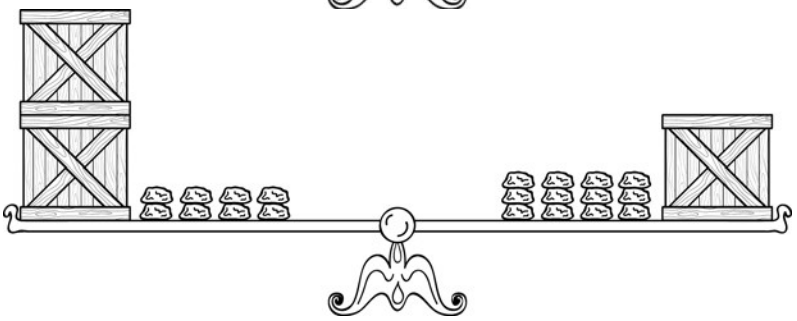
2.



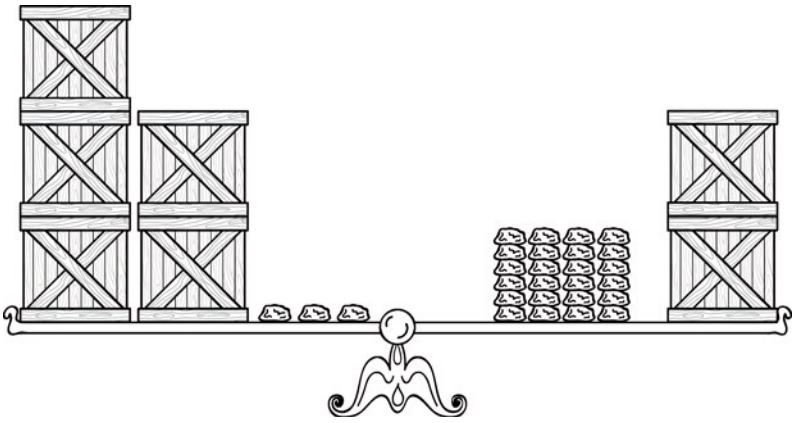
3.



4.



5.



Mr. Anderson wrote down the following equations, but did not draw any pictures. Can you find the value of x in each? (Hint: Think of each x as a crate of rocks.)

6. $7x = 6 + 5x$

7. $30 = 4x + 6$

8. $2(x + 4) = 16$

9. $7 + 5x = 3x + 13$