

One-Step Equations

7a. Graham is solving the equation $d^2 = 1$.

Graham says,



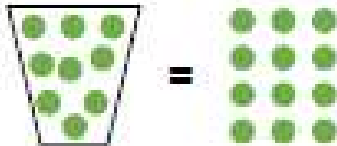
$d = 0.5$ because
 $0.5 + 0.5 = 1$.

Is he correct? Explain your answer.



8a. Amina has created a representation to help her solve the following equation:

$$b + 3 = 12$$

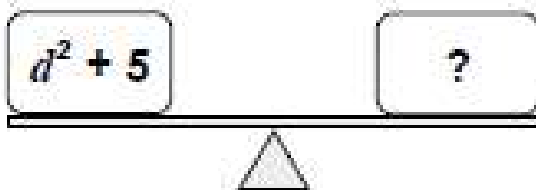


Is Amina correct? Convince me.



9a. Create three different equations that will balance the scale when $d = 7$.

Each equation must include a decimal number or fraction.



One-Step Equations

9b. Circle the equation that is the odd one out.

$$y \times 0.5 = 27\frac{1}{2}$$

$$-45 + 100 = y$$

$$25y = 137.5$$



10b. Which representation matches the expression $n \div 1$?



11b. Compare the value of the letters in each equation using $<$, $>$ or $=$.

$$d \times 8 = 72 \quad \square \quad -5 + e = 2 \quad \square \quad f \div 2 = 3.5$$



12b. What numbers would balance the equations below?

A. $4n = 23$

B. $r - 1.5 = -1$

C. $c = 49 \div c$



Answers:

7a. Graham is incorrect because d^2 means $d \times d = 1$, so $d = 1$; he needs to multiply d , not add it.

8a. No; although Amina has correctly shown that $b = 9$, she has forgotten to add 3 counters to it (as shown in the equation) to create a total of 12.

9a. Various answers, for example:

$$27.5 \times 2 - 1 = d^2 + 5; d^2 + 5 = 50.5 + 3.5; 60$$

$$-6 = d^2 + 5$$

$$9b. 25y = 137.5$$

10b. C

11b. $>$, $=$

$$12b. n = 5.75; r = 0.5; c = 7$$