

## Activity 10 Assessment

### Writing and Solving Equations to Solve Problems

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Solves one-step equations

$$28 - t = 12$$

"I know  $28 - 8 = 20$ .  
So,  $t$  must be more than 8.  
 $28 - 10 = 18$  (too high)  
 $28 - 15 = 13$  (too high, but close)  
So,  $n = 16$  because  $28 - 16 = 12$ ."

Solves multi-step equations

$$6h - 12 = 48$$

$$\begin{aligned} 6h - 12 &= 48 \\ 6h - 12 + 12 &= 48 + 12 \\ 6h &= 60 \\ \frac{6h}{6} &= \frac{60}{6} \\ h &= 10 \end{aligned}$$

"I used preservation of equality and performed the same operation on both sides of the equation each time."

Verifies that the solution to an equation is correct

$$6h - 12 = 48, h = 10$$

I substituted 10 for  $h$  in the original equation and compared each side

$$\begin{aligned} \text{L.S.} &= 6h - 12 & \text{R.S.} &= 48 \\ &= 6(10) - 12 & & \\ &= 60 - 12 & & \\ &= 48 & & \end{aligned}$$

"Since L.S. = R.S., the solution is correct."

Writes and solves equations to solve word problems

Craig works for a dog-walking company. Craig earns \$25 a day, plus \$5 for every dog he walks. On Thursday, Craig earned \$70. How many dogs did Craig walk?

$70 = 25 + 5d$ , where  $d$  represents the number of dogs Craig walked.

$$\begin{aligned} 70 - 25 &= 25 - 25 + 5d \\ 45 &= 5d \\ d &= 9 \end{aligned}$$

Craig walked 9 dogs.

#### Observations/Documentation