

Writing Rules to Describe Change

Start with 8 pennies and add 5 pennies each round.

How many pennies will there be in the jar after 10 rounds?



$$\begin{array}{r} 10 \text{ rounds} \\ \times 5 \text{ pennies per round} \\ \hline 50 \text{ pennies} \end{array}$$

$$+ 8 \text{ pennies from the start}$$

58 Total pennies after round 10

A teacher asked her students to write a rule for the number of pennies for any round, using words or an arithmetic expression.

Luke's rule: You multiply the round number by 5, and then you add 8 because that is the number of pennies in the jar at the beginning.

Steve's rule: Round number $\times 5 + 8$

Sabrina's rule: $8 + (5 \times n)$



Can you use one of these rules or your own rule to find out how many pennies will be in the jar after round 30?

Is there ever a round when you will have exactly 200 pennies in this jar? (If so, what round will that be?) How do you know?