

 Arcade Token Tracker

Name: _____

Date: _____

Class: _____

My level: ☐  Explorer ☐  Investigator ☐  Legend

Mission: You start with 50 tokens at the arcade. Every game costs 4 tokens and wins 12 tickets, plus a 5-ticket welcome bonus. Play games, track the patterns, and write expressions that predict tokens and tickets for ANY number of games.

Big question: How can we write and evaluate expressions for a real situation?

 **Warm-up: Translate it**

Write each phrase as an expression.

4 less than a number n

12 times a number g, plus 5

Key vocabulary	
Expression	A math phrase with numbers, variables, and operations.
Substitute	Replace the variable with a number.
Evaluate	Find the value of an expression.
Constant	A number that doesn't change, like the 5-ticket bonus.

 **Box 1**

Tokens expression

Which expression gives tokens left after g games?

☐ $50 - 4g$ ☐ $4g - 50$ ☐ $50 + 4g$ ☐ $46g$

Tickets expression

Which expression gives tickets after g games ($g \geq 1$)?

☐ $12g + 5$ ☐ $17g$ ☐ $12 + 5g$ ☐ $5g + 12g$

 **Box 2**

Evaluate

Evaluate $12g + 5$ for $g = 8$. How many tickets?

Answer: _____

Show your thinking:

Check with the machine

In the simulator: Play until you have played 8 games.

How many tokens are left after 8 games?

Answer: _____

 **Box 3**

Box 3

Out of tokens

In the simulator: Play as many games as you can.

What is the most games you can play?

Answer: _____

4 Box 4

Legend: the prize Legend only

A giant panda prize costs 150 tickets. What is the fewest games to earn it?

Answer: _____ games

Show your thinking:

5 Box 5

Explain the expression

Explain what each part of $50 - 4g$ means at the arcade.



Exit ticket: answer the big question in your own words

How can we write and evaluate expressions for a real situation?

Completion code:

Shown on the last screen of the simulator.