

Assessment Title: Identifying Functions Game
Unit 5: Modeling and Comparing Functions

Learning Targets:

- Identify a function given data, context, a graph, or an equation as linear, quadratic, or exponential.

Directions:

1. Students will work in groups of 2
2. Each pair will receive a deck with the cards ordered as follows:
 - a. 13 Equations
 - b. 13 Graphs
 - c. 13 Contextual
 - d. 13 Table of Values
3. Each round will go as follows:
 - a. A card is flipped face up between the two students
 - b. Without discussing their choice with one another, students will record the following on their score sheets:
 - i. The card number
 - ii. The type of function they think is represented
4. Play continues around the group until they reach the last card of that type.
5. When they have finished 13 rounds, students will use the answer key and mark an 'X' indicating whether they answered correctly or incorrectly. If their answer was incorrect, students need to write the appropriate type of function in the space provided.
6. Students will answer the questions at the end of each round and discuss their answers with their partner.
7. Then continue to the next set of 13 cards of the next type and repeat the process.
8. When all four rounds have been completed, students will answer the final reflection questions.

If time permits, students may find a new partner and complete the process over with a new deck and score sheets

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Student Score Sheet: Equations

1. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
2. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
3. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
4. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
5. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
6. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
7. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
8. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
9. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
10. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
11. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
12. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
13. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	

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Follow-Up Questions: Equations

- a. When given an equation, which type of function did you identify correctly MOST often?

- b. What strategy/strategies did you use to identify that type of function from an equation?

- c. When given an equation, which type of function did you identify correctly LEAST often?

- d. What are some strategies you could use to improve your ability to correctly identify that type of function?

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Student Score Sheet: Graph

14. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
15. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
16. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
17. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
18. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
19. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
20. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
21. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
22. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
23. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
24. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
25. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
26. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	

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Follow-Up Questions: Graph

- e. When given a graph, which type of function did you identify correctly MOST often?

- f. What strategy/strategies did you use to identify that type of function from an equation?

- g. When given a graph, which type of function did you identify correctly LEAST often?

- h. What are some strategies you could use to improve your ability to correctly identify that type of function?

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Student Score Sheet: Contextual

27. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
28. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
29. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
30. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
31. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
32. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
33. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
34. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
35. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
36. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
37. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
38. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
39. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	

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Follow-Up Questions: Context

- i. When given a word problem, which type of function did you identify correctly MOST often?

- j. What strategy/strategies did you use to identify that type of function from an equation?

- k. When given a word problem, which type of function did you identify correctly LEAST often?

- l. What are some strategies you could use to improve your ability to correctly identify that type of function?

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Student Score Sheet: Equations

40. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
41. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
42. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
43. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
44. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
45. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
46. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
47. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
48. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
49. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
50. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
51. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	
52. Card Number: _____		Correct: _____ Incorrect: _____ Type, if incorrect? _____
Type of Function (Circle One): Linear Quadratic	Exponential	

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Follow-Up Questions: Table of Values

- m. When given a table of values, which type of function did you identify correctly MOST often?

- n. What strategy/strategies did you use to identify that type of function from an equation?

- o. When given a table of values, which type of function did you identify correctly LEAST often?

- p. What are some strategies you could use to improve your ability to correctly identify that type of function?

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Final Reflection

- a. For which representation (equation, graph, contextual, or table) did you have the most success identifying the type of function?

- b. What strategy/strategies did you use for the representation you indicated above to correctly identify the type of function?

- c. For which representation (equation, graph, contextual, or table) did you have the most difficulty identifying the type of function?

- d. What are some strategies you could use to improve your ability to correctly identify function using the representation you indicated above?