

Linear Relationships

Guided Practice

Name _____

Pd. _____

Scenario:

Trent is going to the Texas State Fair. The cost to get into the fair is \$12.00 per child. He is excited about riding rides and playing games while he is at the fair. The cost per ride or game for a child is \$2.00. Trent's dad is also going to the fair and his cost to get into the fair is \$15.00. His dad is going to ride rides and play games as well. The cost per ride or game for an adult is \$2.50.

1. What are the two things being compared in the **story**? _____
 - a. What is the independent variable? _____
 - b. What is the dependent variable? _____
2. What is the rate as it relates to the context of the **story**? _____
3. What is the beginning value/y-intercept as it relates to the context of the story? _____
4. How do you know that the **story** is a linear relationship? _____
5. Create a three-column **table** showing the amount spent for both Trent and his dad at the fair from 0 to 10 rides. Include a title and labels for your **table**.

<i>X</i>	<i>Y</i>	<i>Y</i>

- a. How much money did Trent spend after seven rides?
- b. How much money did his dad spend after ten rides?
- c. How many rides did Trent ride if he spent \$22.00?
- d. How many rides did his dad ride if he spent \$15.00?
- e. If Trent and his dad each brought \$40.00 for the fair, how many rides can each person ride?

6. Use the grid below to **graph** both Trent and his dad's amount spent at the fair. Remember to use GREAT! Graphs as a resource.



7. How do you know if this **graph** is linear? _____

8. Who has the highest rate in the scenario; Trent or his Dad? _____

9. By looking at the **graph**, how do you know who has the highest rate? _____

10. Who has the lowest rate in the scenario; Trent or his Dad? _____

11. By looking at **graph**, how do you know who has the lowest rate? _____

12. How much money did Trent begin (b) with? _____

13. Where can you see Trent's beginning value on the **graph**? _____

14. What was the slope (m) for Trent? _____

15. Write an **equation** for showing how much money Trent spent at the fair in the form of $y = mx + b$. _____

16. How much money did his dad begin (b) with? _____

17. Where can you see dad's beginning value on the **graph**? _____

18. What was the slope (m) for his dad? _____

19. Write an **equation** for showing how much money his dad spent at the fair in the form of $y = mx + b$. _____

20. Which **table** below that represents a linear relationship? _____

Table A

X	Y
-3	3
-2	2
-1	1
0	0
1	1
2	2
3	3

Table B

X	Y
-2	1.5
-1	2.5
0	3.5
1	4.5
2	5.5
3	6.5
4	7.5

21. How do you know if the table is a linear relationship? _____

22. Find the slope (m) and the beginning value (b) of each equation.

a. $y = 2x + 10$ $m =$ _____ $b =$ _____

b. $y = 4x + 3$ $m =$ _____ $b =$ _____

c. $y = -5x + 6.5$ $m =$ _____ $b =$ _____

d. $y = 2x$ $m =$ _____ $b =$ _____

e. $y = 1 + 7x$ $m =$ _____ $b =$ _____

f. $y = 3 - 9x$ $m =$ _____ $b =$ _____

23. In the first column, name the four faces of a linear function. In the second column, write how you know each face is linear.

Four Faces	How do you know each face is linear?