**Day One: Linear and Exponential Group Test**

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| 1. *Directions*: Make a perfect graph of the number of people who walk to school.

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| x (year) | y (number of people) |
| 0 | 3 |
| 1 | 7 |
| 2 | 5 |
| 3 | 10 |
| 4 | 13 |

 |
| 2. Use colors, numbers, words, and arrows to show growth rate and starting number in all of these representations.$$y=2(1.5)^{x}$$

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| x | y |
| 0 | 2 |
| 1 | 3 |
| 2 | 4.5 |
| 3 | 6.75 |

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| 3. *Directions*: Sarah evaluated this function: y = 5x + 4 for x = 2. Explain her steps.*“First, \_\_\_\_\_\_\_\_\_\_.” “Next, \_\_\_\_\_\_\_\_\_.” “Then, \_\_\_\_\_\_\_\_.” “Finally, \_\_\_\_\_\_\_\_.”*

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| y = 5x + 4 |  |
| y = (5)(2) + 4 |  |
| y = 10 + 4 |  |
| y = 14 |  |

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| 4. *Directions*: Here is a table, graph and equation. Ms. Tara says it is an exponential function. Ms. Jess says it is a linear function.Who is correct? Why?*“\_\_\_\_\_\_\_ is correct because \_\_\_\_\_\_\_\_.”*y = 2(3)x

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| **x** | **y** |
| 0 | 2 |
| 1 | 6 |
| 2 | 18 |
| 3 | 54 |
| 4 | 162 |
| 5 | 486 |

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| 5. This graph shows the temperature in the country Albania each month.Temperature in AlbaniaMonthsTemperature in °CThis data is not perfect, but the equation $y=3x+4.5$ is close. Use the equation to make a prediction for the temperature in July.*I think the temperature in July will be \_\_\_\_\_\_\_ because …*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Can we use this equation to make a prediction for December? Why or why not?*I think we \_\_\_\_\_\_\_\_\_\_\_ use the equation to make a prediction for December because…*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**Day 2: Linear and Exponential Test Checklist Box**

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| **Question One*** Three titles, x and y, arrows on axes
* Good numbers
* Points are correct

**Question Two*** Colors show growth and starting number
* Two colors on the graph, equation, table

**Question Three*** Explain where the x number comes from
* Explains multiplying
* Math words: *first, next, then, finally, add, multiply, equation*

**Question Four*** Exponential is correct
* Explains table, graph, equation
* Uses math words: *curved, adding, table, graph, equation, exponent*

**Question Five*** Uses equation to get a number for July
* Explains calculation
* Explains December
 |

**Day 2: Linear and Exponential Test Review**

1. Make a dictionary to use on the test

**Say**: *“Let’s look at Question 1. Are there any words you don’t know?”*

**Do**: Write and translate into ML words you do not know on the test.

**Repeat** this for all the questions.



Call the teacher when everyone is done!

*“Excuse me, we are done!”*

1. Make a perfect test

**Say**: *“What did you get for number 1? Do we agree?”*

**Do**: If you disagree, look at both papers and talk until you agree.

**Say: “***What do we need to write to get a 4?”*

**Do**: Read the checklist box. To get a “4,” check ALL the boxes. If you do not have all the boxes, make a perfect answer. If you have all the boxes, go to the next question.

**Repeat** this for all the questions.



Call the teacher when everyone is done!

*“Excuse me, we are done!”*

1. Check your writing: periods for each sentence, capital letters for each sentence

**Say**: *“Can I check your work? Do you have periods and capital letters?”*

**Do**: Check that all words are in English. Check that every sentence has a capital letter and a period.

**Repeat** this for all the questions.



Call the teacher when everyone is done!

*“Excuse me, we are done!”*

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**Day 2: Linear and Exponential Test Dictionary**

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| English | ML |  | English | ML |
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**Day 3: Exponential and Linear Functions - Individual Test**

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| 1. *Directions*: Make a perfect graph of the number of people who take the bus to school.

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| --- | --- |
| x (month) | y (number of people) |
| 0 | 17 |
| 1 | 27 |
| 2 | 34 |
| 3 | 12 |
| 4 | 22 |

 |
| 2. Use colors, numbers, words, and arrows to show growth rate and starting number in all of these representations. $$y=4(2)^{x}$$

|  |  |
| --- | --- |
| x | y |
| 0 | 4 |
| 1 | 8 |
| 2 | 16 |
| 3 | 32 |

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| 3. *Directions*: Sarah evaluated this function: y = 3(6)x for x = 2. Explain her steps.*“First, \_\_\_\_\_\_\_\_\_\_.” “Next, \_\_\_\_\_\_\_\_\_.” “Then, \_\_\_\_\_\_\_\_.” “Finally, \_\_\_\_\_\_\_\_.”*

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| y = 3(6)x |  |
| y = 3(6)2 |  |
| y = 3(6$∙$6) |  |
| y = 3(36) |  |
| y = 108 |  |

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| 4. *Directions*: Here is a table, graph and equation. Ms. Tara says it is an exponential function. Ms. Jess says it is a linear function.Who is correct? Why?*“\_\_\_\_\_\_\_ is correct because \_\_\_\_\_\_\_\_.”*y = 2 + 3x

|  |  |
| --- | --- |
| **x** | **y** |
| 0 | 2 |
| 1 | 5 |
| 2 | 8 |
| 3 | 11 |
| 4 | 14 |
| 5 | 17 |

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| 5. This graph shows the **rainfall** in San Francisco each month. 0 1 2 3 4 5 6 7 8 9 10 11 monthsThis data is not perfect, but the equation $y=-0.5x+4.75$ is close. Use the equation to make a prediction for the temperature in July.*I think the rainfall in July will be \_\_\_\_\_\_\_ because …*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Can we use this equation to make a prediction for December? Why or why not?*I think we \_\_\_\_\_\_\_\_\_\_\_ use the equation to make a prediction for December because…*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |