Instructions: Determine whether the function or your problem is Linear or Exponential. And provide the Equation of the function either way. Linear in **y =mx + b** form. Exponential**: y = a(b)x**

|  |  |  |
| --- | --- | --- |
| PROBLEM | YOUR RESPONSE | Your name |
| EXAMPLE:  | It‘s Exponential. Multiplying By 3.  y = 1(3)x | Matheo X.“Now next problem goes to student behind me” |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
| Now give back to teacher.☺ |  |  |

Determine whether the function or your problem is Linear or Exponential. And provide the Equation of the function either way. Linear in **y =mx + b** form. Exponential**: y = a(b)x**

|  |  |  |
| --- | --- | --- |
| PROBLEM | YOUR PROCESS & RESPONSE | Linear or ExponentialInclude Equation, Name |
| EXAMPLE:  | Hmmmm…. Where is 1, 2, 3, 4, ? ...Starts at Zero. Ok. From 0 to 12 on the X, then the change on the y is 36….[ 38 – 2 ] ….So slope is 36 over 12 = 3. ☺ Got it. | **Linear:**   Y = 3x + 0, or just y = 3x.-Mathea Y. |
|  |  |  |
|  |  |  |
|  |  |  |
|   |  |  |
|  |  |  |
| Now give back to teacher. ☺ |  |  |

|  |  |  |
| --- | --- | --- |
| **MODEL** | YOUR TURN A. START HERE. |  GOES TO NEXT PERSON IN TEAMOr returns to “first” student, then continues relay. |
| PROBLEM:   2x + 2y = 112  x = y – 4  |  **PROBLEM:** 4X + 2Y = 1320 Y = -X + 380 |  **Next** **PROBLEM:** X – 20 = Y 3X + 11Y = 100 |
| SUBSTITUTE ISOLATED Equation, into other equation: 2( y – 4) + 2y = 112Carlos | \*Calculator Allowed. | \*Calculator Allowed. |
| Next steps solve for y:  2y – 8 + 2y = 112Diana | Next steps solve for x: | Next steps solve for x: |
|  4y – 8 = 112 Paco |  |  |
|   4y = 112 + 8 4y = 120 Liz |  |  |
|  Y = 120/4  Y = 25. Carly |  |  |
| Now we’ll find x:Using X = Y – 4 (given) X = 25 – 4 = 21.Final Answer: (21, 25) Pedro |  |  |
|  |  | Give back to teacher. ☺When both problems solved. |

Check Solution: Check Solution: Check Solution:

|  |  |  |
| --- | --- | --- |
| EXEMPLAR: Solving by**ELIMINATION**  | YOUR TURN A. START HERE. |  GOES TO NEXT PERSON IN TEAMOr returns to “first” student, then continues relay. |
| PROBLEM:   2x + 2y = 12  x – 2y = 18 |  **PROBLEM, YOUR TURN:** 7X – 3Y = 31 21X + 3Y = -3 |   **5X + 2Y = 10** **4X + 3Y = 15** |
| Goal: Add Equations Vertically, Eliminate one Variable: 2x + 2y = 12  x – 2y = 18 +  |  |  Hint: Multiply top Equation, times -3,And bottom equation by 2: (**5X + 2Y = 10** ) – 3 (**4X + 3Y = 15** ) 2 |
|  The Y’s are same number opposite, so they cancel. Left with: 3x = 30 |  | System turns into:  -15x – 6y = - 30  8x + 6y = 30 |
| Solve for x: X = 30/3 X = 10  |  | Now we can add them Vertically: 15x – 6y = - 30  + 8x + 6y = 30 |
|  Now find other variable,Y in this case.Choose either Equation from beginning system, and substitute value found: 🡪 2x + 2y = 12 Becomes: 2(10) + 2y = 12  |  | Outcome: 23x = 0 So x = 0Now you find the value of y. |
|  2(10) + 2y = 12  20 + 2y = 12Now Isolate y (in 2 steps): |  |
|  2y = 12 – 20 2y = -8 y = -8 /2 y = - 4   |  | Answer:The point (0, \_\_) is where the Two lines \_\_\_\_\_\_\_\_\_\_\_\_\_\_. |

Check Solution: Check Solution: Check Solution:

|  |  |  |
| --- | --- | --- |
| Solve by **ELIMINATION, or Substitution.****Work Downwards. ☺**  | Solve by **ELIMINATION, or Substitution.****Work Downwards. ☺** |  Solve by **ELIMINATION, or Substitution.****Work Downwards. ☺**  |
| PROBLEM Given by Teacher, first or next student copies it here:   | PROBLEM Given by Teacher:   |  PROBLEM Given by Teacher:   |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  X = \_\_\_\_\_ Y = \_\_\_\_\_ |  |  |

Next student checks answers down here. Accordingly:

|  |  |  |
| --- | --- | --- |
| Solve by **ELIMINATION, or Substitution.****Work Downwards. ☺**  | Solve by **ELIMINATION, or Substitution.****Work Downwards. ☺** |  Solve by **ELIMINATION, or Substitution.****Work Downwards. ☺**  |
| PROBLEM Given by Teacher, first or next student copies it here:   | PROBLEM Given by Teacher:   |  PROBLEM Given by Teacher:   |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  X = \_\_\_\_\_ Y = \_\_\_\_\_ |  |  |

Checks answers down here. Accordingly:

|  |  |
| --- | --- |
| **Your Name:** |  |
| PROBLEM:  2x + 2y = 112  x = y – 4  | **WARM UP (rounds 1)****EXPLAIN EACH STEP BELOW, then check answers.** |
|  2( y – 4) + 2y = 112 |  |
|  2y – 8 + 2y = 112 |  |
|  4y – 8 = 112  |  |
|   4y = 112 + 8 4y = 120  |  |
|  Y = 120/4  Y = 25 |  |
|  X = Y – 4 X = 25 – 4 = 21.Final Answer: (21, 25)  |  |
| **Check Answers:****‘Top Equation”** | **Check Answers:****‘Bottom Equation”** |

|  |  |
| --- | --- |
| EXEMPLAR: Solving by**ELIMINATION**  | Your Name: |
| PROBLEM:   2x + 2y = 12  x – 2y = 18 | **WARM UP (rounds 2). Will change seats to prepare for “Round Robin” Activity.****EXPLAIN EACH STEP BELOW, then check answers.** |
|  2x + 2y = 12  x – 2y = 18 +  |  |
|   3x = 30 |  |
|  X = 30/3 X = 10  |  |
|   🡪 2x + 2y = 12  2(10) + 2y = 12  |  |
|  2(10) + 2y = 12  20 + 2y = 12 |  |
|  2y = 12 – 20 2y = -8 y = -8 /2 y = - 4   |  |
| **Check Answers:****‘Top Equation”** | **Check Answers:****‘Bottom Equation”** |