**Directly Proportional Relationships**

***Let’s understand directly proportional relationships:***

**Directly Proportional 🡪 *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

***\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

|  |  |
| --- | --- |
| **X** | **Y** |
| **1** | **6** |
| **2** | **3** |
| **3** | **2** |

[[

|  |  |
| --- | --- |
| **X** | **Y** |
| **1** | **4** |
| **2** | **8** |
| **3** | **12** |

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**One of these tables is directly proportional and one is not. How can we decide which one?**

***STEPS:***

1. **Determine directions**

**Write a** *\_\_\_\_* **if the column values are** *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

**Write a** *\_\_\_\_* **if the column values are** *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

1. **If the change is the same** *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

**Find the \_\_\_\_\_\_\_\_\_ and test the \_\_\_\_\_\_\_\_\_\_.**

1. **In order to find the slope, we us the formula** *\_\_\_\_\_\_\_\_\_\_\_\_\_.*
   1. **Label your table**
   2. **Plug the numbers into the formula**
2. **Multiply the numbers in your \_\_\_\_\_\_\_\_\_\_by your slope. If the solution matches the numbers in your \_\_\_\_\_\_\_\_\_ then the table is \_\_\_\_\_\_\_\_\_\_.**

*Example 1:* Directly Proportional: Yes or No

|  |  |
| --- | --- |
| **X** | **Y** |
| **3** | **21** |
| **5** | **35** |
| **6** | **42** |
| **8** | **56** |

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*Example 2:* Directly Proportional: Yes or No

|  |  |
| --- | --- |
| **X** | **Y** |
| **3** | **2** |
| **6** | **4** |
| **9** | **6** |
| **12** | **8** |
| **15** | **10** |

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*Example 3:* Directly Proportional: Yes or No

|  |  |
| --- | --- |
| **X** | **Y** |
| **-2** | **5** |
| **0** | **1** |
| **2** | **5** |
| **4** | **17** |

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The slope must work for ALL \_\_\_\_\_\_\_\_\_\_\_\_\_\_.