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Equation of a Straight Line- Step-by-Step Lesson

Determine if the functions listed below are linear or non-linear.
Explain your reasoning.

1. $y=-5 x^{6}+2$
2. $y=2 x-3+15$

## Explanation:

Linear- The equation must fit into the form $y=m x+b$
The variables cannot have exponents. When graphed they must form a straight line.

Non-linear- Equations that do not graph as a straight line.

1. This equation is $y=-5 x^{6}+2$. It has an exponent 6 .

It is non-linear. A graph of this equation looks like:

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2. This equation is $y=2 x-3+15$. It doesn't have an exponent.

It is linear. Here is what the graph looks like:


