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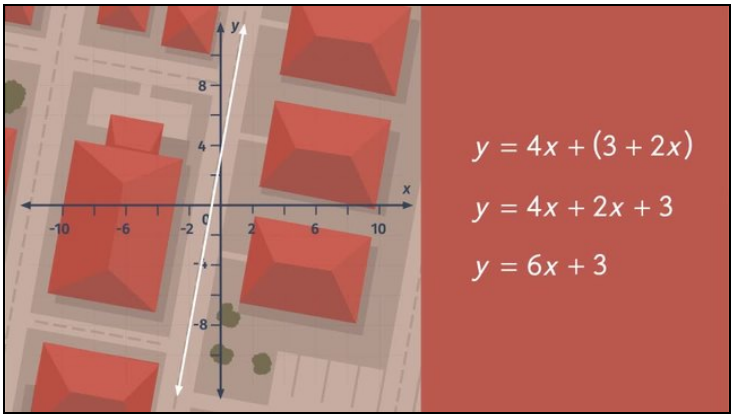
Linear and Nonlinear Expressions



1. **Determine which statements are true.**
2. Identify if an equation is linear and nonlinear.
3. Identify which graphs are linear and which are nonlinear.
4. Determine which factored equations are linear.
5. Find the corresponding expression and state if it is linear or nonlinear.

\+ with lots of tips, answer keys, and detailed answer explanations for all of the problems.

Determine which statements are true.

Choose the correct statements.

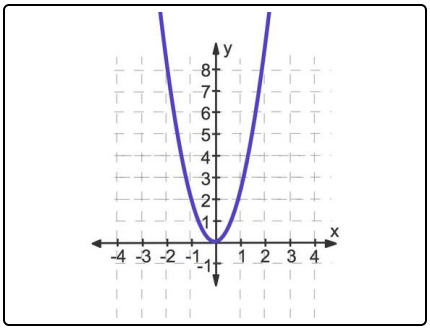
- [ ] **A** $y = 6x + 3$ is an example of a linear equation.
- [ ] **B** The graph of a linear equation is a straight line.
- [ ] **C** The graph of a linear equation is a parabola.
- [ ] **D** $y = 6x^2 + 3x$ is an example of a linear equation.

Hints for solving these problems

1 of 5

Determine which statements are true.

Hint #1



Here is a parabola. The corresponding equation is quadratic: $y = 2x^2$.

Hint #2

This is an example of a linear equation: $y = 2x + 4$.

Answers and detailed answer explanations for these problems

1 of 5

Determine which statements are true.

Answer key: A, B

Linear equations contain variables raised to the power of 1.

All other equations are nonlinear. When written in simplified form, here are some things that make an equation not linear:

- having a variable in the denominator.
- having a variable under a radical.
- having a variable squared or cubed.

If a linear equation is graphed, you see a straight line.