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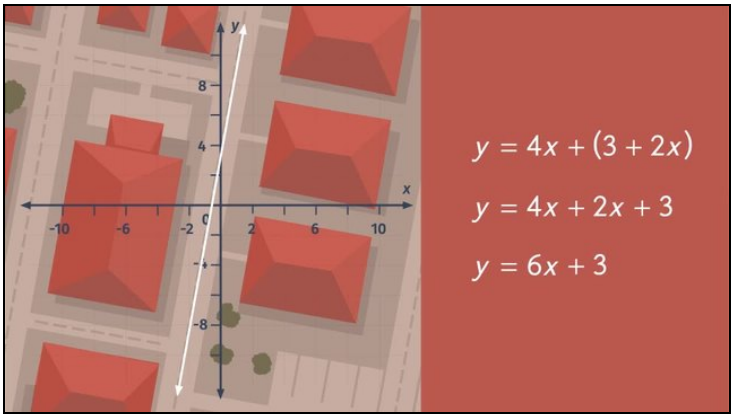
Linear and Nonlinear Expressions



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 many hints, answer keys, and solution approaches for all tasks

Determine which statements are true.

Choose the correct statements.

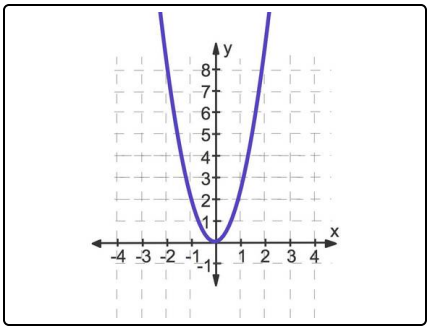
- [ ] A: $y = 6x + 3$ is an example of a linear equation.
- [ ] B: The graph of a linear equation is a straight line.
- [ ] C: The graph of a linear equation is a parabola.
- [ ] D: $y = 6x^2 + 3x$ is an example of a linear equation.

Our hints for the tasks

1 from 5

Determine which statements are true.

1. Hint



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

2. Hint

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

Solutions and solution approaches for the tasks

1 from 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.