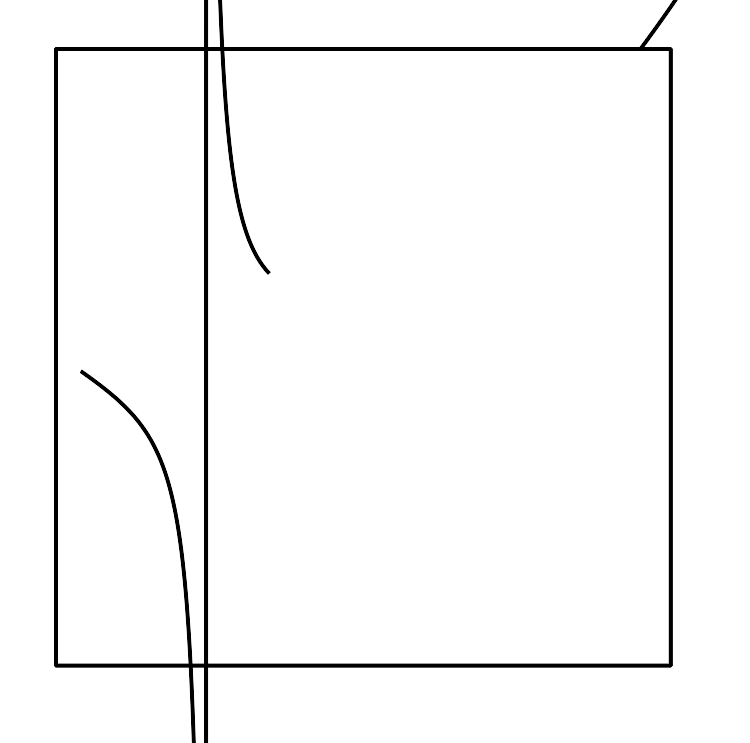
### Lesson 16 Practice Problems

1. There are many cylinders with a volume of cubic inches. The height in inches of one of these cylinders is a function of its radius in inches where .
   1. What is the height of one of these cylinders if its radius is 2 inches?
   2. What is the height of one of these cylinders if its radius is 3 inches?
   3. What is the height of one of these cylinders if its radius is 6 inches?
2. The surface area in square units of a cylinder with a volume of 18 cubic units is a function of its radius in units where . What is the surface area of a cylinder with a volume of 18 cubic units and a radius of 3 units?
3. Han finds an expression for that gives the surface area in square inches of any cylindrical can with a specific fixed volume, in terms of its radius in inches. This is the graph Han gets if he allows  to take on any value between -1 and 5.
   1. What would be a more appropriate domain for Han to use instead?
   2. What is the approximate minimum surface area for the can?

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1. The graph of a polynomial function is shown. Is the degree of the polynomial even or odd? Explain your reasoning.

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* (From Unit 2, Lesson 8.)

1. The polynomial function has known factors of and .
   1. Rewrite as the product of linear factors.
   2. Draw a rough sketch of the graph of the function.

* (From Unit 2, Lesson 12.)

1. Which polynomial has as a factor?

* (From Unit 2, Lesson 15.)



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