Info Gap: Different Forms of Quadratic Expressions

Problem Card 1

1. Write an expression in vertex form that could define a quadratic function, f.
2. Write an expression in factored form that could define a quadratic function, g.
3. Show that f and g do not define the same function.

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Data Card 1

- The vertex of the graph of function f is $(6,-9)$.
- The x-intercepts of the graph of function g are $(-7,0)$ and $(-5,0)$.

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Problem Card 2

Functions a and b are quadratic functions.

1. What are the zeros of function a?
2. What is the vertex of the graph representing function b?
3. Show that a and b do not define the same function.

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Data Card 2

- Function a is defined by $(x-5)^2-4$.
- Function b is defined by $(x+1)(x-5)$.

Authored by OpenStax from Illustrative Mathematics