Precalculus 115, section 2.1 Function Basics
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Examples A: Given the function $f(x) = 2x - 3$, specify the domain then evaluate at the indicated values.

1. $f(0) =$

    On the graph, we'd have the point

2. $f(-1) =$

    On the graph, we'd have the point

3. $f(t) =$

    Written in coordinate form, we'd have the point

4. $f(t + 2) =$

    Written in coordinate form, we'd have the point

Examples B: Given the function $g(x) = x^2 - x$, specify the domain then evaluate at the indicated values.

1. $g(0) =$

    On the graph, we'd have the point

2. $g(2) =$

    On the graph, we'd have the point

3. $g(-2) =$

    On the graph, we'd have the point

4. $g(t) =$

    Written in coordinate form, we'd have the point

5. $g\left(\dfrac{3}{t+2}\right) =$

Written in coordinate form, we'd have the point

6. $g(-x) =$

Written in coordinate form, we'd have the point

Examples C: Given the function $h(t) = \dfrac{1}{2}t - \dfrac{1}{2t}$, specify the domain then evaluate at the indicated values.

1. $h(1) =$

On the graph, we'd have the point

2. $h(-1) =$

On the graph, we'd have the point

3. $h(3) =$

On the graph, we'd have the point

4. $h\left(\dfrac{1}{3}\right) =$

On the graph, we'd have the point

5. $h(x) =$

Written in coordinate form, we'd have the point

6. $h\left(\dfrac{1}{x}\right) =$

Written in coordinate form, we'd have the point

Examples A revisited: Evaluate the function $f(x) = 2x - 3$ at the indicated values.

1. $h(2x) =$

2. $2h(x) =$

Examples D: Find the domain of each of the functions below.

1. $f(x) = \dfrac{x^2 - 1}{x^2 + 5x - 6}$

2. $g(x) = \sqrt{5 - 4x}$

3. $g(x) = \sqrt{15 + 2x - x^2}$

Examples E: Find the domain of each of the functions below.

1. $y = \dfrac{t}{\sqrt{t + 5}}$

2. $y = \dfrac{t}{\sqrt{t + 5} - 1}$

3. $y = \dfrac{t}{\sqrt{t} + 5}$

4. $y = \dfrac{t}{\sqrt{t} - 5}$