Learning Target: I can use function notation to represent a function.

Example 1
Evaluate $f(x) = -4x + 7$ when $x = 2$ and $x = -2$.

Example 2
Let $f(t)$ be the outside temperature (°F) $t$ hours after 6 a.m. Explain the meaning of each statement.

1. $f(0) = 58$
2. $f(6) = n$
3. $f(3) < f(9)$

Monitoring Progress 1-3
Evaluate the function when $x = 3$ and $x = -2$.

Example 3
For $h(x) = \frac{3}{x} - 5$, find the value of $x$ for which $h(x) = -7$.

Example 4
Graph $f(x) = 2x + 5$. 
Find the value of $x$ so that the function has the given value.

4. $f(x) = 6x + 9; f(x) = 21$
   \[ \frac{21}{6} = \frac{6x}{9} \]
   \[ x = 3 \]

5. $g(x) = -\frac{1}{2}x + \frac{3}{2}; g(x) = -1$
   \[ \frac{-1}{2}x + \frac{3}{2} = -1 \]
   \[ x = 5 \]

Graph the linear function.

6. $f(x) = 3x - 2$

7. $g(x) = -x + 4$

8. $h(x) = \frac{3}{4}$

The graph shows the number of miles a helicopter is from its destination after $x$ hours on its first flight. On its second flight, the helicopter travels 50 miles farther and increases its speed by 25 miles per hour. The function $f(x) = 350 - 125x$ represents the second flight, where $f(x)$ is the number of miles the helicopter is from its destination after $x$ hours. Which flight takes less time? Explain.

9. WHAT IF? Let $f(x) = 250 - 75x$ represent the second flight, where $f(x)$ is the number of miles the helicopter is from its destination after $x$ hours. Which flight takes less time? Explain.

Writing Prompt: What do you understand when you see $f(x) = 4x - 3$?