

First Name: _____

Last Name: _____

130 - EQ - 6.4 Function Notation

Use the following information to answer Q1-Q4:

$f(x) = 2x + 1$	$g(x) = x^2 - 4x + 5$	$h(x) = \frac{-4}{3}x + \frac{2}{3}$
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Q1: What is $f(5) = ?$

$$\begin{aligned}
 f(x) &= 2(x) + 1 \\
 f(5) &= 2(5) + 1 \\
 &= 10 + 1 \\
 &= 11
 \end{aligned}$$

Q2: What is $g(-2) = ?$

$$\begin{aligned}
 g(x) &= (x)^2 - 4(x) + 5 \\
 g(-2) &= (-2)^2 - 4(-2) + 5 \\
 &= 4 + 8 + 5 \\
 &= 17
 \end{aligned}$$

Q3: When $f(x) = 6$, $x = ?$

$$\begin{aligned}
 f(x) &= 2x + 1 \\
 6 &= 2x + 1 \\
 5 &= 2x \\
 x &= \frac{5}{2}
 \end{aligned}$$

Q4: When $h(x) = 4$, $x = -\frac{a}{b}$, where $\frac{a}{b}$ is a simplified fraction, and a and b are ___ and ___.

(Record your two digit answer in the Numerical Response boxes below)

5	2		
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$$\begin{aligned}
 h(x) &= -\frac{4}{3}x + \frac{2}{3} \\
 4 &= -\frac{4}{3}x + \frac{2}{3} \\
 -\frac{2}{3} & \qquad \qquad -\frac{2}{3}
 \end{aligned}$$

$$4 - \frac{2}{3} = -\frac{4}{3}x$$

$$\begin{aligned}
 \frac{10}{3} &= -\frac{4}{3}x \\
 \div (-\frac{4}{3}) & \div (-\frac{4}{3})
 \end{aligned}$$

$$-\frac{5}{2} = x$$

$$x = -\frac{5}{2}$$

$$x = -\frac{a}{b}$$

so $a = 5$
 $b = 2$

MARKING:

Beginning	0.0 – 1.5
Progressing	2.0 – 2.5
Competent	3.0 – 3.5
Exemplary	4.0