Functions (Part 1): Function Notation and Evaluate Functions

First & Last Name: _____ **Class:** _____

If you did not get full points on the *Functions* section of the "Pre-Review" test, attempt all of the (non-challenge) questions on this handout. Check your answers using the answer key. If you did not get a correct answer, use Khan Academy to review and master the topic.
Honor Students: you are expected to master the challenge questions.

Section 1: Evaluate functions (KA link)

1. If $f(x) = -11x - 3$, find

a. $f(0)$ **b.** $f(1)$ **c.** $f(-2)$ **d.** $f(-5)$

2. [Challenge]

a. If $g(t) = 3t^2 - 5$ find $g(-3)$. **b.** If $j(k) = 2^{k+1}$ find $j(2)$.

Section 2: Evaluate functions from their graph (KA link)

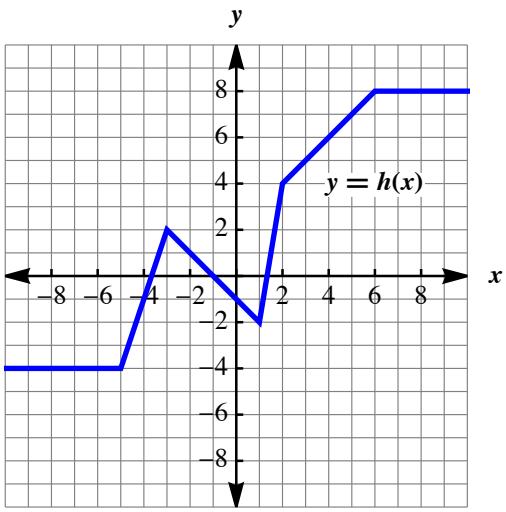
1. Use the graph to find

a. $h(-4)$

b. $h(1)$

c. $h(5)$

d. $h(-10)$

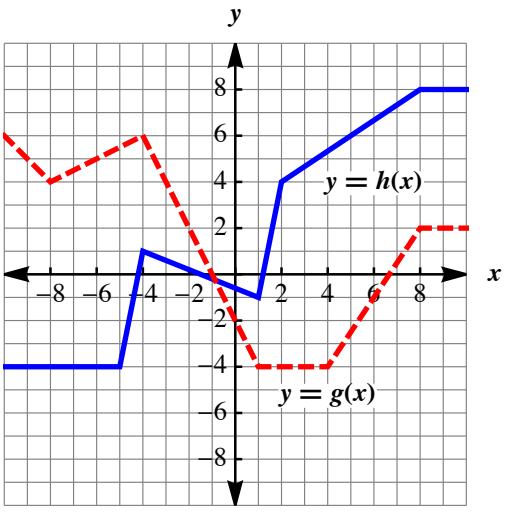


Section 3: Evaluate function expressions (KA link)

1. Use the graph to find

a. $3 \cdot h(2) - 2 \cdot g(-8)$

b. $3g(4) - 2h(5)$

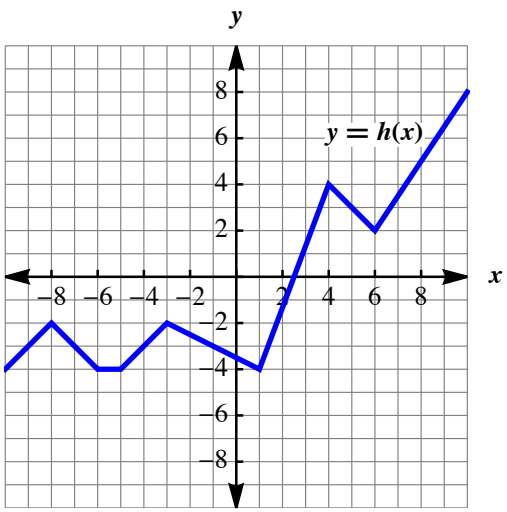


Section 4: Function inputs & outputs: equation (KA link)

1. If $g(x) = -4x + 7$, then $g(\quad) = 19$.
2. If $f(t) = 11t - 10$, then $f(\quad) = -43$.
3. [Challenge] If $h(x) = \frac{x}{2} - \frac{2}{3}$, then $h(\quad) = \frac{-5}{3}$.

Section 5: Function inputs & outputs: graph (KA link)

1. If $h(x) = 4$, then $x =$
2. If $h(x) = -2$, then $x =$



Section 6: Function rules from equations (KA link)

1. For a given input value r, the function h outputs a value q to satisfy the equation $q - 5 = 3(r - 1)$. Write a formula for $h(r)$ in terms of r.
2. For a given input value x, the function f outputs a value y to satisfy the equation $y + 7 = 5(x - 8)$. Write a formula for $f(x)$ in terms of x.
3. [Challenge] For a given input value x, the function g outputs a value y to satisfy the equation $2y - 4x = 6(x - 2)$. Write a formula for $g(x)$ in terms of x.

Section 7: Function notation word problems (KA link)

1. Maria is a Lyft driver. $L(n)$ models how much she makes, in dollars, for her n^{th}drive on a certain day. What does the statement $L(6) = G$ mean?
   - **a.** Maria makes \$6 for her G^{th} drive.
   - **b.** The amount Maria makes for her G^{th} drive and 6^{th} are equal.
   - **c.** Maria makes G dollars on her 6^{th} drive.
2. A plane takes off from San Diego Airport to Boston. $H(s)$ models the height of the aircraft (in miles) after flying s miles. What does the statement $H(.5) = T$ mean?
   - **a.** After flying for half a mile, the plane was at a height of T miles.
   - **b.** The height of the plane after half a mile is the same as the height after T miles.
   - **c.** After flying for T miles, the plane was at a height of half a mile.