Algebra 1   Name:_____

Function Notation Worksheet #2

Use the functions below to evaluate at the given value.

$$f(x) = 4x - 7 \qquad g(x) = 4^x \qquad h(x) = \sqrt{x}$$

$$j(x) = 2x^2 - 3 \qquad k(x) = |x - 3|$$

_____

1. $f(-2) =$

2. $g(3) =$

3. $h(25) =$

4. $j(-1) =$

5. $k(-2) =$

6. $g(-2) =$

7. $k(-1) - 5 =$

8. $f(0) + 7 =$

9. $g(0) =$

10. $f(a - 1) =$

11. $j(3a) =$

12. $f(2p - 3q) =$

13. Phil works at a department store and gets an employee discount. The price he pays can be modeled by the function $d(c) = c - 0.08c$, where c is the original price of the item. Find $d(25)$ and describe what this means in context.

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1. $f(-2) = 4(-2) - 7$

   $-8 - 7$

   $\boxed{-15}$

2. $g(3) = 4^3$

   $\boxed{64}$

3. $h(25) = \sqrt{25}$

   $\boxed{5}$

4. $j(-1) = 2(-1)^2 - 3$

   $2 - 3$

   $\boxed{-1}$

5. $k(-2) = |-2 - 3|$

   $|-5|$

   $\boxed{5}$

6. $g(-2) = 4^{-2}$

   0.0625

7. $k(-1) - 5 =$

   $|-1 - 3| - 5$

   $|-4| - 5$

   $4 - 5$

   $\boxed{-1}$

8. $f(0) + 7 =$

   $4(0) - 7 + 7$

   $0 - 7$

   $-7 \quad +7$

   $\boxed{0}$

9. $g(0) =$

   4^0

   $\boxed{1}$

10. $f(a - 1) =$

    $4(a - 1) - 7$

    $4a - 4 - 7$

    $\boxed{4a - 11}$

11. $j(3a) =$

    $2(3a)^2 - 3$

    $2 \cdot 9a^2 - 3$

    $\boxed{18a^2 - 3}$

12. $f(2p - 3q) =$

    $4(2p - 3q) - 7$

    $\boxed{8p - 12q - 7}$

13. Phil works at a department store and gets an employee discount. The price he pays can be modeled by the function $d(c) = c - 0.08c$, where c is the original price of the item. Find $d(25)$ and describe what this means in context.

$$d(25) = 25 - 0.08(25)$$

$$25 - 2$$

$$d(25) = \$23$$