Name _____ Date _____ Period _____

1.10 HW – Composition of Functions

$f(x)=4x-12$	$g(x)=-2x+6$	$h(x)=-3x+8$

Given *f(x)*, *g(x)* and *h(x)* as shown above, find the solution (evaluate) to the composition of functions.

1 $f[h(3)]$

2. $h[f(2)]$

3. $g[h(2)]=$

4. $h[g(5)]=$

5. $f[g[h(2)]]=$

6. $g[h[f(-1)]]=$

7. $f[g[h(5)]]=$

8. $g[h[f(-3)]]=$

$f(x)=4x-12$	$g(x)=-2x+6$	$h(x)=-3x+8$

Given *f(x), g(x)* and *h(x)* as shown above, write the composite functions:

9 $f[h(x)]$

10. $h[f(x)]$

11. $g[h(x)]=$

12. $f[g(x)]=$

13. $g[f[h(x)]]=$

14. $f[g[h(x)]]=$

Given *f(x), g(x)* and *h(x)* as shown above:

15. If $h[g[f(x)]]=-34$, find x such that the solution to the composite function is (x, h(g(f(x))).

16. If $f[g[h(x)]]=-28$, find x such that the solution to the composite function is (x, f(g(h(x))).

17. If $g[h[f(x)]]=-130$, find x such that the solution to the composite function is (x, g(h(f(x))).