

Name \_\_\_\_\_

Date \_\_\_\_\_

## Logarithmic Expressions - Matching Worksheet

Write the letter of the equivalent expression for each problem.

\_\_\_\_\_ 1.  $\ln [(9x-6) (4x+6)]^4$

a.  $q=1024$

\_\_\_\_\_ 2.  $\ln [(3x-4) (5x+10)]^7$

b.  $\log_4 65536=8$

\_\_\_\_\_ 3.  $\ln [(2x-6) (11x+8)]^8$

c.  $4[\ln(9x-6)+\ln(4x+6)]$

\_\_\_\_\_ 4. Write  $8^4=65536$  in logarithmic form.

d.  $s=2401$

\_\_\_\_\_ 5. Write  $3^{10} = 59049$  in logarithmic form.

e.  $8[\ln(2x-6)+\ln(11x+8)]$

\_\_\_\_\_ 6. Write  $7^4=2401$  in logarithmic form.

f.  $p=6561$

\_\_\_\_\_ 7. Solve for p: $\log_4 p=9$

g.  $r=512$

\_\_\_\_\_ 8. Solve for q: $\log_5 q=4$

h.  $\log_3 59049=10$

\_\_\_\_\_ 9. Solve for r: $\log_3 r=8$

i.  $7[\ln(3x-4)+\ln(5x+10)]$

\_\_\_\_\_ 10. Solve for s: $\log_4 s=7$

j.  $\log_7 2401=4$

