

Name \_\_\_\_\_

Date \_\_\_\_\_

## Solving Exponential Equations - Matching Worksheet

Write the letter of the answer that matches the problem.

\_\_\_\_\_ 1. Solve the exponential equation:  $11^{x-3} = 1331^{x-3}$

a.  $x = 3$

\_\_\_\_\_ 2. Solve the exponential equation:  $12^{x-4} = 20736^{x-4}$

b.  $x = -3$

\_\_\_\_\_ 3. Solve the exponential equation:  $13^{x-5} = 371293^{x-5}$

c.  $x = 3$

\_\_\_\_\_ 4. Solve the exponential equation:  $14^{x-3} = 2744^{x-3}$

d.  $x = -4$

\_\_\_\_\_ 5. Solve the exponential equation:  $15^{x-4} = 50625^{x-4}$

e.  $x = -2$

\_\_\_\_\_ 6. Solve the exponential equation:  $9^{5x+7} = 1/729$

f.  $x = 4$

\_\_\_\_\_ 7. Solve the exponential equation:  $10^{4x+9} = 1/1000$

g.  $x = -3$

\_\_\_\_\_ 8. Solve the exponential equation:  $11^{7x+11} = 1/1331$

h.  $x = 5$

\_\_\_\_\_ 9. Solve the exponential equation:  $12^{8x+21} = 1/1728$

i.  $x = -2$

\_\_\_\_\_ 10. Solve the exponential equation:  $13^{9x+33} = 1/2197$

j.  $x = 4$

