



## Radical Match

Name \_\_\_\_\_

MATCH each radical equation with its correct solution. Be sure to check for extraneous roots. When finished, fill in the missing letters to decode the hidden message.

\_\_\_ 1.  $\sqrt{x} + 3 = 7$

\_\_\_ 2.  $\sqrt{x+10} = 2$

\_\_\_ 3.  $9 = \sqrt{x} + 7$

\_\_\_ 4.  $3\sqrt{x} + x^2 = 15 + x^2$

\_\_\_ 5.  $\sqrt{x+5} + 1 = 3$

\_\_\_ 6.  $2\sqrt{x} + 7 = 5$

\_\_\_ 7.  $\sqrt{5x-2} = \sqrt{x+6}$

\_\_\_ 8.  $\sqrt{x} = \sqrt{6x-15}$

\_\_\_ 9.  $\sqrt{5x-9} - x = -1$

\_\_\_ 10.  $x-3 = \sqrt{30-2x}$

\_\_\_ 11.  $\sqrt{x^2 - x - 2} = 2$

\_\_\_ 12.  $\sqrt{x+5} = \sqrt{x^2 + 5}$

\_\_\_ 13.  $\sqrt{9x^2 + 4x - 4} = 3x$

**Answers:**

G.  $x = 7$

A.  $x = 0, 1$

I.  $x = -2, 3$

B.  $x = 16$

L.  $x = -1$

C.  $x = 2$

R.  $x = -6$

D.  $x = 3$

S.  $x = 4$

E.  $x = 2, 5$

T.  $x = 25$

F.  $x = -3, 7$

V.  $x = 1$

Y. no real solution

**Decode the message:**

$\overline{12}$   $\overline{5}$   $\overline{10}$   $\overline{9}$   $\overline{1}$   $\overline{2}$   $\overline{12}$

$\overline{11}$   $\overline{3}$   $\overline{12}$

$\overline{2}$   $\overline{12}$   $\overline{8}$   $\overline{11}$   $\overline{7}$   $\overline{12}$   $\overline{5}$

$\overline{12}$   $\overline{7}$   $\overline{4}$   $\overline{11}$   $\overline{13}$   $\overline{11}$   $\overline{4}$   $\overline{6}$  !