

1.21.16

Solve the following radical equation. Check your solutions.

$$4 + \sqrt{-3m + 10} = m$$

$$(\sqrt{-3m + 10})^2 = (m - 4)^2$$

$$-3m + 10 = (m - 4)(m - 4)$$

$$-3m + 10 = m^2 - 8m + 16$$

$$+3m - 10 \quad +3m - 10$$

$$0 = m^2 - 5m + 6$$

$$\begin{array}{c} 6 \\ -3 \end{array} \begin{array}{c} m \\ -2 \end{array} \begin{array}{c} m \\ -2 \end{array}$$

m^2	$-3m$
$-2m$	6

$$0 = (m - 3)(m - 2)$$

$$m = 3 \quad m = 2$$

No solution

	m	-4
m	m^2	$-4m$
-4	$-4m$	$+16$

$$4 + \sqrt{-3(3) + 10} = 3$$

$$4 + \sqrt{1} = 3$$

$$4 + 1 = 3 \quad \times$$

$$4 + \sqrt{-3(2) + 10} = 2$$

$$4 + \sqrt{4} = 2$$

$$6 = 2 \quad \times$$