

1.19.16

You need a calculator today.

Solve the following radical equation. Check your solutions.

$$(\sqrt{2v-7}) = (v-3)^2$$

$$2v-7 = (v-3)(v-3)$$

$$\cancel{2v-7} = v^2 - 6v + 9$$

$$\cancel{-2v+7} \quad \quad \quad -2v+7$$

$$0 = v^2 - 8v + 16$$

$$\begin{array}{r} 16 \\ -4 \quad -4 \\ \hline -8 \end{array}$$

$$\begin{array}{r|rr} & v & -4 \\ \hline v & v^2 & -4v \\ -4 & -4v & 16 \end{array}$$

$$0 = (v-4)(v-4)$$

$$v=4$$

$$\begin{array}{r|rr} & v & -3 \\ \hline v & v^2 & -3v \\ -3 & -3v & +9 \end{array}$$

$$\sqrt{2(4)-7} = 4-3$$

$$\sqrt{1} = 1 \checkmark$$