

6.6.15

simplify. Your answer should contain only positive exponents with no fractional exponents in the denominator.

$$\left(m^1 \cdot m^{-2} n^{\frac{5}{3}} \right)^2$$

$$\left(m^{-1} \cdot n^{\frac{5}{3}} \right)^2$$

$$m^{-1 \cdot 2} \cdot n^{\frac{5}{3} \cdot 2}$$

$$\frac{m^{-2}}{1} \cdot \frac{n^{10/3}}{1}$$

$$\frac{1}{m^2} \cdot \frac{n^{10/3}}{1}$$

$$\boxed{\frac{n^{10/3}}{m^2}}$$

9) $2 \cdot m^2 \cdot 4 \cdot m^{\frac{3}{2}} \cdot 4 \cdot m^{-2}$
 $2 \cdot 4 \cdot 4 m^{2 + \frac{3}{2} + -2}$
 $32 m^{\frac{3}{2}}$

Solve for k.

$$(\sqrt{8k})^2 = (k)^2$$

$$8k = k^2$$
$$-8k \quad -8k$$

$$0 = k^2 - 8k$$

$$0 = k(k - 8)$$

$$0 = k$$

$$8 = k$$

$$0 = k - 8$$
$$+8 \quad +8$$

$$\sqrt{8(0)} = 0$$
$$0 = 0 \checkmark$$
$$\sqrt{8(8)} = 8$$
$$8 = 8 \checkmark$$

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

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

$$v-7 = v^2 - 6v + 9 - 3$$

v	-3
v^2	$-3v$
$-3v$	$+9$

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

$$1 = 1\checkmark$$

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

~~$$\begin{array}{r} \text{a.c} \\ 16 \\ 4 \cdot -4 \\ + \\ -8 \\ 0 \\ 0 \\ 6 \end{array}$$~~

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

$$0 = v-4 \quad 0 = v-4$$

$$v=4$$

$$-3 = (37 - 3n)^{\frac{1}{2}} - n$$

$$-3 + n = (37 - 3n)^{\frac{1}{2}}$$

-3	n
9	-3n
-3n	n ²

$$(-3 + n)^2 = 37 - 3n$$

$$(-3 + n)(-3 + n) = 37 - 3n$$

$$n^2 - 6n + 9 = 37 - 3n$$

$$n^2 - 3n - 28 = 0$$

$$\begin{array}{r} \text{a.c} \\ -28 \\ 7 \times 4 \\ + \\ -3 \\ \hline 6 \end{array}$$

$$(n - 7)(n + 4) = 0$$

$$n = 7$$

$$n = -4$$

Extraneous

$$-3 = (37 - 3(7))^{\frac{1}{2}} - (7) \text{ True}$$

$$-3 = (37 - 3(-4))^{\frac{1}{2}} - (-4) \text{ False}$$

#2, 4, 6, 8