Solve the following equations. Simplify your answers completely.

$$x = \sqrt{15 - 2x}$$

$$\sqrt[4]{5x^2 - 6} = x$$

$$\frac{7}{2y-3} + \frac{3}{(2y-3)^2} = 6$$

$$1 + 3(r^2 - 1)^{-1} = 28(r^2 - 1)^{-2}$$

$$(r-1)^{\frac{2}{3}} = 12 - (r-1)^{\frac{1}{3}}$$

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

$$\sqrt{y} = \sqrt{y-5} + 1$$

$$(2k-9)^{-\frac{2}{3}} + 4(2k-9)^{\frac{1}{3}} = 0$$

$$\sqrt{5x-1} + \sqrt{2-x} = \sqrt{8x+1}$$

$$\sqrt{x} + 2 = \sqrt{4 + 7\sqrt{x}}$$

$$\sqrt{2x+3} - \sqrt{x+1} = 1$$

$$3 + \frac{5}{p^2+1} = \frac{2}{(p^2+1)^2}$$

$$2(1 - 2\sqrt{x})^2 - (1 - 2\sqrt{x}) = 21$$

$$20(2 - \sqrt{m})^2 + 11(2 - \sqrt{m}) = 3$$

$$\sqrt{6m+7} - 1 = m + 1$$

$$\sqrt{3z+7} = 3z + 5$$

$$p(2+p)^{-\frac{1}{2}} + (2+p)^{\frac{1}{2}} = 0$$

$$\sqrt{2p-5} - 2 = \sqrt{p-2}$$

$$\sqrt{2\sqrt{7x+2}} = \sqrt{3x+2}$$

$$3 - \sqrt{x} = \sqrt{2\sqrt{x} - 3}$$