

$$\frac{8}{t^2-2t} - \frac{4}{t-2} = 2$$

$$\frac{t(t-2)}{1} \left(\frac{8}{\underline{t(t-2)}} - \frac{4}{\underline{t-2}} \right) = \underline{2t(t-2)}$$

$$8 - 4t = 2t^2 - 4t$$

$$8 = 2t^2$$

$$0 = 2t^2 - 8$$

$$0 = 2(t^2 - 4)$$

$$0 = 2(t-2)(t+2)$$

$$t = \cancel{2} - 2$$

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

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

$$\sqrt{ab} = \sqrt{a} \sqrt{b}$$

$$(\sqrt{5y-1})^2 = (y+1)^2$$

$$5y-1 = (y+1)(y+1)$$

$$5y-1 = y^2+2y+1$$

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

$$\sqrt{(5y-1)(5y-1)}$$

$$0 = y^2 - 3y + 2$$

$$0 = (y-1)(y-2)$$

$$y = 1, 2$$

$$\sqrt{7 \cdot 7} = 7$$

$$\sqrt{5 \cdot 5} = 5$$

$$(\sqrt{a})^2 = a$$

$h = \text{height (ft)}$
 $t = \text{time (sec)}$

$$h = 10t + 3$$

$$h = -16t^2 + 10t + 3$$

$$h = -16t^2 + v_0t + h_0$$

Formula

$$h = -16t^2 + 80t + 4$$

how fast
 how high start it
 initial velocity
 initial height

Find the height after 2 seconds.

$$h = -16(2)^2 + 80(2) + 4 = \# \text{ feet}$$

When is the soccer ball 20 ft high?

Find t!

$$20 = -16t^2 + 80t + 4$$

$$0 = -16t^2 + 80t - 16$$

Factor or quad formula

$$A = \underline{P} + \underline{P}r t$$