



p195

| time t | 0 | 1 | 2 | 3 | 4 |
|-------------------|---|-----|-----|-----|-----|
| x horizontal | 0 | 120 | 240 | 360 | 480 |

$$x(t) = 120t$$

| time t | 0 | 1 | 2 | 3 | 4 |
|-----------------|---|------|------|------|------|
| y vertical | 0 | 13.4 | 26.8 | 40.2 | 53.6 |

$$y(t) = 13.4t$$

$$x(t) = 2t$$

$$y(t) = t - 1$$

$$x = 2t$$

$$y = t - 1$$

$$y + 1 = t$$

$$x = 2t$$

$$x = 2(y + 1)$$

$$x = 2y + 2$$

$$x - 2 = 2y$$

$$\frac{x - 2}{2} = \frac{2y}{2}$$

$$\frac{1}{2}x - 1 = y$$

$$y = \frac{1}{2}x - 1$$

Write as
a single
equation

Solve 1 equation
for t

$$t =$$

Substitute
into the
other equation

$$x(t) = 70t$$

$$y(t) = 6 + 25t - 16t^2$$

$$x = 70t$$

$$y = 6 + 25t - 16t^2$$

$$\frac{x}{70} = t$$

$$y = 6 + 25\left(\frac{x}{70}\right) - 16\left(\frac{x}{70}\right)^2$$

$$y = 6 + \frac{25x}{70} - \frac{16x^2}{4900}$$

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10-26E

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