

When is the curve:  $y = 3x^2 + 6x$   
a minimum?

answer 2

$$2/1 - = x$$

$$\frac{dy}{dx} = -\frac{2}{3}x^{-3}$$

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

$$x = 2$$

$$\frac{dy}{dt} = 18t$$

When is the curve:  $y = -4x^2 + 8x$   
a maximum?

$$y = (2x^2 + 10x)^3$$

$$t = t^3 - t^2$$

$$dy/dx = -9(3x + 3)^2$$

$$y = (6x + 3)^{-2}$$

When is the curve:  $y = -12x^2 + 8x$   
a maximum?

$$\frac{dy}{dt} = 12t^5 - 12t^3$$

$$y = (2x^2 + 3x)^3$$

$$y = 1$$

$$3 + 3x)^3$$

$$dy/dx = 3(4x+10)(2x^2 + 3x)^2$$

$$y = (2x^3 + 10x)^3$$

$$y = (x^2 + 3)^2$$

$$dy/dx = 6(2x+3)$$

$$dy/dx = 3(4x+3)(2x^2 + 3x)^2$$

$$dy/dx = 3(2x^2 + 3x)$$

$$x = 1$$

$$0 = x$$

$$\frac{dy}{dt} = 3t^2 - 2t$$

$$y = 3t^6 - 2t^3$$

$$y = (3x + 3)^3$$

$$y = (-3x + 3)^2$$

$$\frac{dy}{dx} = -0.5x^{-1.5}$$

When is the curve:  $y = 3x^2 + 10$  a minimum?

$$\frac{dy}{dt} = 16t + 7$$

$$y = (6x + 3)^{-4}$$

$$\sqrt{10x}$$

$$y = \sqrt{5x+10}$$

