

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

$$f'(-10) = 4.907$$

$$2) f(x) = \cos 5x$$

$$f'(2) = 2.72009$$

$$3) f(x) = \ln(\sqrt{x})$$

$$f'(1) = \frac{1}{2}$$

$$4) f(x) = e^{x/3}$$

$$f'(4) = 1.2645$$

$$5) f(x) = \tan(\sin x)$$

$$f'(-3) = -1.00997$$

$$6) f(x) = 2^{\ln x}$$

$$f'(2) = 0.5603$$

$$7) f(t) = \frac{t}{\cos t}$$

$$f'(2) = 8.098$$

$$8) f(t) = \sin^2 t$$

$$f'(12.5) = -0.132$$

$$9) f(x) = \cos(\tan x)$$

<u>point</u>	<u>slope</u>
(2, -0.576)	$f'(2) = 4.7188$

$$\text{Tangent: } y + 0.576 = 4.7188(x-2)$$

$$\text{Normal: } y + 0.576 = -\frac{1}{4.7188}(x-2)$$

$$10) f(x) = \frac{x^4}{\sqrt{x}}$$

<u>point</u>	<u>slope</u>
(3, 46.765)	$f'(3) = 54.5596$

$$\text{Tangent: } y - 46.765 = 54.5596(x-3)$$

$$\text{Normal: } y - 46.765 = -\frac{1}{54.5596}(x-3)$$