

DIFFERENTIATION WORKSHEET III  
(the chain rule)

Find the following derivatives:

(1)  $(e^{\sin(x)})'$

,

(2)  $(\cos(e^x - 4x + 5))'$

,

(3)  $((20x + 5)^{10})'$

(4)  $(\sqrt{x^3 + x})'$

,

$$(5) (\sin(\cos(x)))'$$

,

$$(6) (x \cos(5x + 1))'$$

,

$$(7) \left( \frac{e^{4x}}{\sin(5x)} \right)'$$

$$(8) (e^{\cos(x^2)})'$$