

## 'Graphing the IPCC Carbon Dioxide Predictions'

a)  $20 \times y \times 1/2 = 4.2 \times 10^{14}$  (area under graph)  $y = 4.2 \times 10^{14} \times 2 \div 20$   
 $y = 4.2 \times 10^{13}$  (or  $42 \times 10^{12}$ , can do reality check against graph)  
change in  $y$  (3)

b) Gradient of graph =  
 $= -2.1 \times 10^{12}$   
 $y = -2.1 \times 10^{12}x + c$   
Substitute in the point (2040,0)  $0 = -2.1 \times 10^{12}(2040) + c$   
 $0 = -4.284 \times 10^{15} + c$   
 $c = 4.284 \times 10^{15}$   
SO  $y = -2.1 \times 10^{12}x + 4.284 \times 10^{15}$  (3)

c) Any graph in this form:  
 $y = -2.1 \times 10^{12}x + c$   
for example:  
 $y = -2.1 \times 10^{12}x + 20$  (1)