1440 Q1 Sol'n

1. $\int (3x^2+4)\,dx$

$= 3\frac{1}{3}x^3 + 4x + C$

$= x^3 + 4x + C$

2. $\int_1^2 2(3x+4)^5\,dx$

$u = 3x+4$ if $x=1$ $u=7$
$du = 3\,dx$ $x=2$ $u=10$
$\frac{1}{3}du = dx$

$= \frac{2}{3}\int_7^{10} u^5\,du$

$= \frac{2}{3}\cdot\frac{1}{6}u^6\Big|_7^{10}$

$= \frac{1}{9}(10^6 - 7^6)$