Name: _____

(a) Compute

$$\sum_{i=1}^{30}(i^3 + i).$$

(b) Compute

$$\int_{2}^{4}(4x^3 + 6x^2 + 5x + 4)dx.$$

Solutions to Quiz 9

(a)

$$\sum_{i=1}^{30}(i^3 + i) = \sum_{i=1}^{10}i^3 + \sum_{i=1}^{10}i$$

$$= [(30)(30+1)/2]^2 + (30)(30+1)/2 = [465]^2 + 465$$

$$= (465)(466) = 216690.$$

(b)

$$\int (4x^3 + 6x^2 + 5x + 4)dx = x^4 + 2x^3 + 5x/2 + 4x.$$

So

$$\int_2^4 (4x^3 + 6x^2 + 5x + 4)dx = [4^4 + 2(4^3) + 5(4)/2 + 4(4)] - [2^4 + 2(2^3) + 5(2)/2 + 4(2)] = 390.$$