42. $$\lim_{n\to\infty}\sum_{i=1}^{n}\left(2+\frac{3i}{n}\right)^3\left(\frac{3}{n}\right) = \lim_{n\to\infty}\frac{3}{n}\sum_{i=1}^{n}\left[\frac{2n+3i}{n}\right]^3$$

$$= \lim_{n\to\infty}\frac{3}{n^4}\sum_{i=1}^{n}\left(8n^3+36n^2i+54ni^2+27i^3\right)$$

$$= \lim_{n\to\infty}\frac{3}{n^4}\left(8n^4+36n^2\frac{n(n+1)}{2}+54n\frac{n(n+1)(2n+1)}{6}+27\frac{n^2(n+1)^2}{4}\right)$$

$$= \lim_{n\to\infty}3\left(8+18\frac{(n+1)}{n}+\frac{9(n+1)(2n+1)}{n^2}+\frac{27}{4}\cdot\frac{(n+1)^2}{n^2}\right)$$

$$= 3\left(8+18+18+\frac{27}{4}\right) = \frac{609}{4} = 152.25$$