Rewrite each term as an equivalent fraction using the LCD, which is $36m^6$:

$$\frac{4}{9m^2} - \frac{n^2}{6m^4} + \frac{5n}{12m^6} = \frac{4(4m^4)}{(9m^2)(4m^4)} - \frac{n^2(6m^2)}{(6m^4)(6m^2)} + \frac{5n(3)}{(12m^6)(3)}$$

$$=\frac{16m^4}{36m^6} - \frac{6m^2n^2}{36m^6} + \frac{15n}{36m^6} = \frac{16m^4 - 6m^2n^2 + 15n}{36m^6}$$