

$$* (2m^3n + m^2n^4)(6m^3n - 5m^2n^4)$$

$$2m^3n(6m^3n) + 2m^3n(-5m^2n^4)$$

$$(m^2n^4)(6m^3n) + (m^2n^4)(-5m^2n^4)$$

$$12m^6n^2 - 10m^5n^5 + 6m^5n^5 - 5m^4n^8$$

$$12m^6n^2 - 4m^5n^5 - 5m^4n^8$$