Multiplying Two Binomials (F)

Simplify each expression.

1. $(-2m^2 - m)(-3m^2 - 4m)$

2. $(-5x^3 - 4x^2)(2x + 2)$

3. $(-2m^3 - 3m^2)(2m^2 + 9m)$

4. $(4d^5 - 5d^4)(2d^5 + 2d^4)$

5. $(m + 6)(-9m^3 - 6m^2)$

6. $(4v^5 + 7v^4)(2v^5 + 8v^4)$

7. $(-7x^4 + 5x^3)(2x^4 - 2x^3)$

8. $(5n^3 - n^2)(-9n^5 - 2n^4)$

9. $(6x^4 + 6x^3)(6x^4 + 7x^3)$

10. $(-5c^4 - 7c^3)(6c^3 + 4c^2)$

Simplify each expression.

1. $(-2m^2 - m)(-3m^2 - 4m)$
   $= 6m^4 + 11m^3 + 4m^2$

2. $(-5x^3 - 4x^2)(2x + 2)$
   $= -10x^4 - 18x^3 - 8x^2$

3. $(-2m^3 - 3m^2)(2m^2 + 9m)$
   $= -4m^5 - 24m^4 - 27m^3$

4. $(4d^5 - 5d^4)(2d^5 + 2d^4)$
   $= 8d^{10} - 2d^9 - 10d^8$

5. $(m + 6)(-9m^3 - 6m^2)$
   $= -9m^4 - 60m^3 - 36m^2$

6. $(4v^5 + 7v^4)(2v^5 + 8v^4)$
   $= 8v^{10} + 46v^9 + 56v^8$

7. $(-7x^4 + 5x^3)(2x^4 - 2x^3)$
   $= -14x^8 + 24x^7 - 10x^6$

8. $(5n^3 - n^2)(-9n^5 - 2n^4)$
   $= -45n^8 - n^7 + 2n^6$

9. $(6x^4 + 6x^3)(6x^4 + 7x^3)$
   $= 36x^8 + 78x^7 + 42x^6$

10. $(-5c^4 - 7c^3)(6c^3 + 4c^2)$
    $= -30c^7 - 62c^6 - 28c^5$