Multiplying Two Trinomials (A)

Simplify each expression.

1. $(3t^5 - 5t^4 + 7t^3)(5t^2 + 4t + 5)$

2. $(7f^4 + 4f^3 - 3f^2)(2f^3 + 6f^2 - 6f)$

3. $(2s^3 - s^2 + 5s)(-9s^4 + s^3 - 6s^2)$

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

5. $(-8x^3 + 4x^2 - 2x)(-6x^4 - 8x^3 - 4x^2)$

6. $(-8k^5 - 6k^4 - 8k^3)(k^2 - 9k + 3)$

7. $(-8p^2 + 9p + 2)(-4p^2 - 7p - 4)$

8. $(-7z^5 - 2z^4 + 5z^3)(2z^4 - 8z^3 - 8z^2)$

9. $(-5q^4 - 8q^3 + 6q^2)(2q^4 + 3q^3 - 8q^2)$

10. $(-5p^5 + 8p^4 - 4p^3)(5p^5 - 7p^4 + 2p^3)$

Simplify each expression.

1. $(3t^5 - 5t^4 + 7t^3)(5t^2 + 4t + 5)$
   $= 15t^7 - 13t^6 + 30t^5 + 3t^4 + 35t^3$

2. $(7f^4 + 4f^3 - 3f^2)(2f^3 + 6f^2 - 6f)$
   $= 14f^7 + 50f^6 - 24f^5 - 42f^4 + 18f^3$

3. $(2s^3 - s^2 + 5s)(-9s^4 + s^3 - 6s^2)$
   $= -18s^7 + 11s^6 - 58s^5 + 11s^4 - 30s^3$

4. $(3y^4 + 9y^3 + 8y^2)(-4y^4 + y^3 - 5y^2)$
   $= -12y^8 - 33y^7 - 38y^6 - 37y^5 - 40y^4$

5. $(-8x^3 + 4x^2 - 2x)(-6x^4 - 8x^3 - 4x^2)$
   $= 48x^7 + 40x^6 + 12x^5 + 8x^3$

6. $(-8k^5 - 6k^4 - 8k^3)(k^2 - 9k + 3)$
   $= -8k^7 + 66k^6 + 22k^5 + 54k^4 - 24k^3$

7. $(-8p^2 + 9p + 2)(-4p^2 - 7p - 4)$
   $= 32p^4 + 20p^3 - 39p^2 - 50p - 8$

8. $(-7z^5 - 2z^4 + 5z^3)(2z^4 - 8z^3 - 8z^2)$
   $= -14z^9 + 52z^8 + 82z^7 - 24z^6 - 40z^5$

9. $(-5q^4 - 8q^3 + 6q^2)(2q^4 + 3q^3 - 8q^2)$
   $= -10q^8 - 31q^7 + 28q^6 + 82q^5 - 48q^4$

10. $(-5p^5 + 8p^4 - 4p^3)(5p^5 - 7p^4 + 2p^3)$
    $= -25p^{10} + 75p^9 - 86p^8 + 44p^7 - 8p^6$