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

Multiplying Two Trinomials (A) Answers

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

Multiplying Two Trinomials (B)

Simplify each expression.

1. $(6b^3 - 2b^2 - 2b)(-5b^4 - 2b^3 - 5b^2)$

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

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

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

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

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

7. $(-5s^5 + 9s^4 - 4s^3)(3s^4 - s^3 - 9s^2)$

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

9. $(9h^3 - 5h^2 - 9h)(-6h^3 + 7h^2 - 6h)$

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

Multiplying Two Trinomials (B) Answers

Simplify each expression.

1. $(6b^3 - 2b^2 - 2b)(-5b^4 - 2b^3 - 5b^2)$
$= -30b^7 - 2b^6 - 16b^5 + 14b^4 + 10b^3$

2. $(2r^4 + 2r^3 - 8r^2)(2r^5 + 3r^4 + 7r^3)$
$= 4r^9 + 10r^8 + 4r^7 - 10r^6 - 56r^5$

3. $(-4d^2 - 5d + 6)(6d^2 + 2d + 6)$
$= -24d^4 - 38d^3 + 2d^2 - 18d + 36$

4. $(8f^2 - 8f + 9)(-9f^5 - f^4 + 4f^3)$
$= -72f^7 + 64f^6 - 41f^5 - 41f^4 + 36f^3$

5. $(-4f^4 - 5f^3 - 3f^2)(3f^3 + f^2 + 3f)$
$= -12f^7 - 19f^6 - 26f^5 - 18f^4 - 9f^3$

6. $(5c^5 - 3c^4 - 8c^3)(-6c^5 + 8c^4 + 4c^3)$
$= -30c^{10} + 58c^9 + 44c^8 - 76c^7 - 32c^6$

7. $(-5s^5 + 9s^4 - 4s^3)(3s^4 - s^3 - 9s^2)$
$= -15s^9 + 32s^8 + 24s^7 - 77s^6 + 36s^5$

8. $(9n^5 + 9n^4 - 6n^3)(-3n^5 + 3n^4 - 2n^3)$
$= -27n^{10} + 27n^8 - 36n^7 + 12n^6$

9. $(9h^3 - 5h^2 - 9h)(-6h^3 + 7h^2 - 6h)$
$= -54h^6 + 93h^5 - 35h^4 - 33h^3 + 54h^2$

10. $(-t^3 - 5t^2 - 4t)(6t^4 + 5t^3 + 9t^2)$
$= -6t^7 - 35t^6 - 58t^5 - 65t^4 - 36t^3$

Multiplying Two Trinomials (C)

Simplify each expression.

1. $(5x^3 - x^2 - 6x)(6x^3 + 8x^2 - 7x)$

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

3. $(-7w^3 - 3w^2 + 6w)(-6w^3 - 3w^2 + w)$

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

5. $(7f^4 - 6f^3 - 6f^2)(-8f^5 + 4f^4 - 6f^3)$

6. $(9q^2 + 2q + 7)(7q^3 - 5q^2 - 6q)$

7. $(-8v^2 - 7v + 2)(-6v^4 + 9v^3 - 2v^2)$

8. $(-7w^5 - 6w^4 + 9w^3)(w^3 - 4w^2 - 9w)$

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

10. $(-4h^2 + 4h + 9)(3h^2 - 9h - 5)$

Multiplying Two Trinomials (C) Answers

Simplify each expression.

1. $(5x^3 - x^2 - 6x)(6x^3 + 8x^2 - 7x)$
$= 30x^6 + 34x^5 - 79x^4 - 41x^3 + 42x^2$

2. $(-f^3 - 4f^2 + 3f)(-f^4 + 4f^3 - 2f^2)$
$= f^7 - 17f^5 + 20f^4 - 6f^3$

3. $(-7w^3 - 3w^2 + 6w)(-6w^3 - 3w^2 + w)$
$= 42w^6 + 39w^5 - 34w^4 - 21w^3 + 6w^2$

4. $(-9c^2 + 2c - 5)(5c^2 - 3c + 5)$
$= -45c^4 + 37c^3 - 76c^2 + 25c - 25$

5. $(7f^4 - 6f^3 - 6f^2)(-8f^5 + 4f^4 - 6f^3)$
$= -56f^9 + 76f^8 - 18f^7 + 12f^6 + 36f^5$

6. $(9q^2 + 2q + 7)(7q^3 - 5q^2 - 6q)$
$= 63q^5 - 31q^4 - 15q^3 - 47q^2 - 42q$

7. $(-8v^2 - 7v + 2)(-6v^4 + 9v^3 - 2v^2)$
$= 48v^6 - 30v^5 - 59v^4 + 32v^3 - 4v^2$

8. $(-7w^5 - 6w^4 + 9w^3)(w^3 - 4w^2 - 9w)$
$= -7w^8 + 22w^7 + 96w^6 + 18w^5 - 81w^4$

9. $(-5n^4 - 4n^3 - 6n^2)(-6n^3 + 2n^2 - 4n)$
$= 30n^7 + 14n^6 + 48n^5 + 4n^4 + 24n^3$

10. $(-4h^2 + 4h + 9)(3h^2 - 9h - 5)$
$= -12h^4 + 48h^3 + 11h^2 - 101h - 45$

Multiplying Two Trinomials (D)

Simplify each expression.

1. $(-5r^2 - 4r + 8)(-4r^2 + r + 3)$

2. $(-7a^3 + 2a^2 + 9a)(6a^2 - 7a - 4)$

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

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

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

6. $(7x^3 - 5x^2 + 5x)(3x^2 - 6x - 3)$

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

8. $(7v^3 - 5v^2 - 9v)(8v^3 + 6v^2 - 7v)$

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

10. $(-2v^5 + 8v^4 - 3v^3)(7v^2 + 9v + 5)$

Multiplying Two Trinomials (D) Answers

Simplify each expression.

1. $(-5r^2 - 4r + 8)(-4r^2 + r + 3)$
$= 20r^4 + 11r^3 - 51r^2 - 4r + 24$

2. $(-7a^3 + 2a^2 + 9a)(6a^2 - 7a - 4)$
$= -42a^5 + 61a^4 + 68a^3 - 71a^2 - 36a$

3. $(-8t^5 - 8t^4 - 9t^3)(-2t^3 + 9t^2 - 4t)$
$= 16t^8 - 56t^7 - 22t^6 - 49t^5 + 36t^4$

4. $(-q^5 + q^4 + 3q^3)(7q^4 + 8q^3 - q^2)$
$= -7q^9 - q^8 + 30q^7 + 23q^6 - 3q^5$

5. $(-8y^4 - 9y^3 + 9y^2)(y^2 + 8y + 2)$
$= -8y^6 - 73y^5 - 79y^4 + 54y^3 + 18y^2$

6. $(7x^3 - 5x^2 + 5x)(3x^2 - 6x - 3)$
$= 21x^5 - 57x^4 + 24x^3 - 15x^2 - 15x$

7. $(-3p^5 - 7p^4 + 5p^3)(-6p^2 - 2p + 4)$
$= 18p^7 + 48p^6 - 28p^5 - 38p^4 + 20p^3$

8. $(7v^3 - 5v^2 - 9v)(8v^3 + 6v^2 - 7v)$
$= 56v^6 + 2v^5 - 151v^4 - 19v^3 + 63v^2$

9. $(-5y^2 + 2y + 4)(3y^2 - y + 9)$
$= -15y^4 + 11y^3 - 35y^2 + 14y + 36$

10. $(-2v^5 + 8v^4 - 3v^3)(7v^2 + 9v + 5)$
$= -14v^7 + 38v^6 + 41v^5 + 13v^4 - 15v^3$

Multiplying Two Trinomials (E)

Simplify each expression.

1. $(-8p^3 - 6p^2 - 8p)(-6p^2 + 2p + 4)$

2. $(-8c^3 - 7c^2 - c)(-3c^2 + 2c - 8)$

3. $(3v^3 + 9v^2 + 2v)(-v^3 - 2v^2 - 7v)$

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

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

6. $(-4d^4 - 3d^3 + 7d^2)(4d^2 - 6d - 1)$

7. $(9a^2 + 6a + 4)(-8a^2 + 7a + 3)$

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

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

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

Multiplying Two Trinomials (E) Answers

Simplify each expression.

1. $(-8p^3 - 6p^2 - 8p)(-6p^2 + 2p + 4)$
$= 48p^5 + 20p^4 + 4p^3 - 40p^2 - 32p$

2. $(-8c^3 - 7c^2 - c)(-3c^2 + 2c - 8)$
$= 24c^5 + 5c^4 + 53c^3 + 54c^2 + 8c$

3. $(3v^3 + 9v^2 + 2v)(-v^3 - 2v^2 - 7v)$
$= -3v^6 - 15v^5 - 41v^4 - 67v^3 - 14v^2$

4. $(-w^5 + 2w^4 - 7w^3)(-6w^5 + 4w^4 + 6w^3)$
$= 6w^{10} - 16w^9 + 44w^8 - 16w^7 - 42w^6$

5. $(4k^2 + 6k - 7)(k^5 + 7k^4 - 3k^3)$
$= 4k^7 + 34k^6 + 23k^5 - 67k^4 + 21k^3$

6. $(-4d^4 - 3d^3 + 7d^2)(4d^2 - 6d - 1)$
$= -16d^6 + 12d^5 + 50d^4 - 39d^3 - 7d^2$

7. $(9a^2 + 6a + 4)(-8a^2 + 7a + 3)$
$= -72a^4 + 15a^3 + 37a^2 + 46a + 12$

8. $(-9d^3 - 8d^2 + 5d)(3d^5 - 4d^4 - d^3)$
$= -27d^8 + 12d^7 + 56d^6 - 12d^5 - 5d^4$

9. $(-3d^5 + 2d^4 - 6d^3)(5d^5 - 9d^4 - 4d^3)$
$= -15d^{10} + 37d^9 - 36d^8 + 46d^7 + 24d^6$

10. $(4t^5 - 6t^4 + 5t^3)(4t^5 + t^4 - 2t^3)$
$= 16t^{10} - 20t^9 + 6t^8 + 17t^7 - 10t^6$

Multiplying Two Trinomials (F)

Simplify each expression.

1. $(8f^4 - 6f^3 + 3f^2)(-7f^5 + f^4 - 4f^3)$

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

3. $(-7k^4 - 2k^3 - 9k^2)(6k^5 + 9k^4 + 3k^3)$

4. $(-3w^2 - 2w - 3)(-w^2 + 8w + 2)$

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

6. $(-2d^2 - 5d - 3)(-7d^4 + d^3 - 8d^2)$

7. $(-7s^2 + 7s + 9)(5s^5 + 3s^4 - 5s^3)$

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

9. $(-7g^2 - 6g + 7)(-g^3 - 2g^2 + 3g)$

10. $(-6d^2 + 8d + 2)(-4d^5 - 2d^4 - 2d^3)$

Multiplying Two Trinomials (F) Answers

Simplify each expression.

1. $(8f^4 - 6f^3 + 3f^2)(-7f^5 + f^4 - 4f^3)$
$= -56f^9 + 50f^8 - 59f^7 + 27f^6 - 12f^5$

2. $(2q^5 - 6q^4 - 5q^3)(-7q^5 + 7q^4 - 5q^3)$
$= -14q^{10} + 56q^9 - 17q^8 - 5q^7 + 25q^6$

3. $(-7k^4 - 2k^3 - 9k^2)(6k^5 + 9k^4 + 3k^3)$
$= -42k^9 - 75k^8 - 93k^7 - 87k^6 - 27k^5$

4. $(-3w^2 - 2w - 3)(-w^2 + 8w + 2)$
$= 3w^4 - 22w^3 - 19w^2 - 28w - 6$

5. $(-8z^4 - 2z^3 - 5z^2)(-3z^4 + 7z^3 - z^2)$
$= 24z^8 - 50z^7 + 9z^6 - 33z^5 + 5z^4$

6. $(-2d^2 - 5d - 3)(-7d^4 + d^3 - 8d^2)$
$= 14d^6 + 33d^5 + 32d^4 + 37d^3 + 24d^2$

7. $(-7s^2 + 7s + 9)(5s^5 + 3s^4 - 5s^3)$
$= -35s^7 + 14s^6 + 101s^5 - 8s^4 - 45s^3$

8. $(-7a^2 + 5a + 3)(7a^4 - 7a^3 - 3a^2)$
$= -49a^6 + 84a^5 + 7a^4 - 36a^3 - 9a^2$

9. $(-7g^2 - 6g + 7)(-g^3 - 2g^2 + 3g)$
$= 7g^5 + 20g^4 - 16g^3 - 32g^2 + 21g$

10. $(-6d^2 + 8d + 2)(-4d^5 - 2d^4 - 2d^3)$
$= 24d^7 - 20d^6 - 12d^5 - 20d^4 - 4d^3$

Multiplying Two Trinomials (G)

Simplify each expression.

1. $(-6q^4 - 9q^3 - 3q^2)(2q^5 - 4q^4 - 2q^3)$

2. $(6d^3 + 4d^2 + 3d)(3d^2 + 4d + 9)$

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

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

5. $(6f^2 + 5f + 3)(7f^3 + 8f^2 - 4f)$

6. $(8t^5 + 4t^4 + 6t^3)(4t^2 - 7t - 3)$

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

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

9. $(6m^5 + 3m^4 + 7m^3)(-7m^3 + 6m^2 - 8m)$

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

Multiplying Two Trinomials (G) Answers

Simplify each expression.

1. $(-6q^4 - 9q^3 - 3q^2)(2q^5 - 4q^4 - 2q^3)$
$= -12q^9 + 6q^8 + 42q^7 + 30q^6 + 6q^5$

2. $(6d^3 + 4d^2 + 3d)(3d^2 + 4d + 9)$
$= 18d^5 + 36d^4 + 79d^3 + 48d^2 + 27d$

3. $(-3c^4 + c^3 + 3c^2)(-6c^3 + 7c^2 + 4c)$
$= 18c^7 - 27c^6 - 23c^5 + 25c^4 + 12c^3$

4. $(9m^2 - 2m + 8)(m^3 + 3m^2 + 8m)$
$= 9m^5 + 25m^4 + 74m^3 + 8m^2 + 64m$

5. $(6f^2 + 5f + 3)(7f^3 + 8f^2 - 4f)$
$= 42f^5 + 83f^4 + 37f^3 + 4f^2 - 12f$

6. $(8t^5 + 4t^4 + 6t^3)(4t^2 - 7t - 3)$
$= 32t^7 - 40t^6 - 28t^5 - 54t^4 - 18t^3$

7. $(2f^2 + 2f - 8)(-8f^3 + 8f^2 - 4f)$
$= -16f^5 + 72f^3 - 72f^2 + 32f$

8. $(9b^5 + 2b^4 + 4b^3)(4b^4 - 6b^3 + 8b^2)$
$= 36b^9 - 46b^8 + 76b^7 - 8b^6 + 32b^5$

9. $(6m^5 + 3m^4 + 7m^3)(-7m^3 + 6m^2 - 8m)$
$= -42m^8 + 15m^7 - 79m^6 + 18m^5 - 56m^4$

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

Multiplying Two Trinomials (H)

Simplify each expression.

1. $(-4f^4 - 8f^3 + 7f^2)(-8f^5 - 3f^4 - 9f^3)$

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

3. $(4a^5 - a^4 - 3a^3)(-7a^3 + 6a^2 + 8a)$

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

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

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

7. $(2n^2 - 2n - 5)(4n^5 - 6n^4 - n^3)$

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

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

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

Multiplying Two Trinomials (H) Answers

Simplify each expression.

1. $(-4f^4 - 8f^3 + 7f^2)(-8f^5 - 3f^4 - 9f^3)$
$= 32f^9 + 76f^8 + 4f^7 + 51f^6 - 63f^5$

2. $(4w^5 + 9w^4 + 3w^3)(-8w^3 + 9w^2 + 8w)$
$= -32w^8 - 36w^7 + 89w^6 + 99w^5 + 24w^4$

3. $(4a^5 - a^4 - 3a^3)(-7a^3 + 6a^2 + 8a)$
$= -28a^8 + 31a^7 + 47a^6 - 26a^5 - 24a^4$

4. $(4w^5 + 2w^4 + 7w^3)(5w^2 - 3w - 6)$
$= 20w^7 - 2w^6 + 5w^5 - 33w^4 - 42w^3$

5. $(-n^2 + 5n + 4)(-n^3 - 7n^2 + 3n)$
$= n^5 + 2n^4 - 42n^3 - 13n^2 + 12n$

6. $(-9q^3 + q^2 - 6q)(5q^2 - 3q - 5)$
$= -45q^5 + 32q^4 + 12q^3 + 13q^2 + 30q$

7. $(2n^2 - 2n - 5)(4n^5 - 6n^4 - n^3)$
$= 8n^7 - 20n^6 - 10n^5 + 32n^4 + 5n^3$

8. $(2b^5 - 2b^4 - 3b^3)(3b^3 + 3b^2 + 4b)$
$= 6b^8 - 7b^6 - 17b^5 - 12b^4$

9. $(-n^4 + 6n^3 + 7n^2)(5n^3 + 8n^2 - 9n)$
$= -5n^7 + 22n^6 + 92n^5 + 2n^4 - 63n^3$

10. $(4p^4 - 7p^3 - 2p^2)(-6p^5 - 6p^4 - p^3)$
$= -24p^9 + 18p^8 + 50p^7 + 19p^6 + 2p^5$

Multiplying Two Trinomials (I)

Simplify each expression.

1. $(2z^5 + 9z^4 - 2z^3)(-2z^4 - 3z^3 - 7z^2)$

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

3. $(6m^5 + m^4 + 7m^3)(-3m^5 - 8m^4 + 6m^3)$

4. $(8k^4 + 6k^3 - 9k^2)(-k^2 - 7k + 8)$

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

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

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

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

9. $(5y^5 - 7y^4 + 5y^3)(-5y^2 + 9y - 5)$

10. $(4t^4 - 8t^3 + 7t^2)(9t^3 - 7t^2 - t)$

Multiplying Two Trinomials (I) Answers

Simplify each expression.

1. $(2z^5 + 9z^4 - 2z^3)(-2z^4 - 3z^3 - 7z^2)$
$= -4z^9 - 24z^8 - 37z^7 - 57z^6 + 14z^5$

2. $(-8x^4 + 4x^3 + 3x^2)(6x^3 - 2x^2 - 4x)$
$= -48x^7 + 40x^6 + 42x^5 - 22x^4 - 12x^3$

3. $(6m^5 + m^4 + 7m^3)(-3m^5 - 8m^4 + 6m^3)$
$= -18m^{10} - 51m^9 + 7m^8 - 50m^7 + 42m^6$

4. $(8k^4 + 6k^3 - 9k^2)(-k^2 - 7k + 8)$
$= -8k^6 - 62k^5 + 31k^4 + 111k^3 - 72k^2$

5. $(8s^2 + 4s - 2)(9s^4 - 8s^3 - 4s^2)$
$= 72s^6 - 28s^5 - 82s^4 + 8s^2$

6. $(-8n^5 - 2n^4 + 2n^3)(3n^2 + 6n - 9)$
$= -24n^7 - 54n^6 + 66n^5 + 30n^4 - 18n^3$

7. $(c^5 - 3c^4 + c^3)(4c^3 - 3c^2 - 6c)$
$= 4c^8 - 15c^7 + 7c^6 + 15c^5 - 6c^4$

8. $(7g^3 + 3g^2 - g)(7g^5 + 3g^4 + 8g^3)$
$= 49g^8 + 42g^7 + 58g^6 + 21g^5 - 8g^4$

9. $(5y^5 - 7y^4 + 5y^3)(-5y^2 + 9y - 5)$
$= -25y^7 + 80y^6 - 113y^5 + 80y^4 - 25y^3$

10. $(4t^4 - 8t^3 + 7t^2)(9t^3 - 7t^2 - t)$
$= 36t^7 - 100t^6 + 115t^5 - 41t^4 - 7t^3$

Multiplying Two Trinomials (J)

Simplify each expression.

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

2. $(-7d^5 - 8d^4 + 2d^3)(4d^3 + d^2 + 6d)$

3. $(7y^4 - 9y^3 - 9y^2)(-4y^3 - 9y^2 - 4y)$

4. $(-3a^5 + 4a^4 + 9a^3)(7a^5 - 5a^4 - a^3)$

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

6. $(2c^2 + c + 1)(2c^5 + 8c^4 - 6c^3)$

7. $(p^5 - 4p^4 + 5p^3)(p^3 - 4p^2 - 9p)$

8. $(-4a^3 - 6a^2 + 7a)(5a^4 - 8a^3 - 8a^2)$

9. $(9y^2 + 7y - 4)(2y^4 - 9y^3 + 7y^2)$

10. $(-4f^2 + 2f + 9)(-8f^4 - 2f^3 - 9f^2)$

Multiplying Two Trinomials (J) Answers

Simplify each expression.

1. $(4m^3 - m^2 + m)(-m^3 + 2m^2 - 3m)$
$= -4m^6 + 9m^5 - 15m^4 + 5m^3 - 3m^2$

2. $(-7d^5 - 8d^4 + 2d^3)(4d^3 + d^2 + 6d)$
$= -28d^8 - 39d^7 - 42d^6 - 46d^5 + 12d^4$

3. $(7y^4 - 9y^3 - 9y^2)(-4y^3 - 9y^2 - 4y)$
$= -28y^7 - 27y^6 + 89y^5 + 117y^4 + 36y^3$

4. $(-3a^5 + 4a^4 + 9a^3)(7a^5 - 5a^4 - a^3)$
$= -21a^{10} + 43a^9 + 46a^8 - 49a^7 - 9a^6$

5. $(8a^3 - 4a^2 + a)(8a^4 + 8a^3 + 4a^2)$
$= 64a^7 + 32a^6 + 8a^5 - 8a^4 + 4a^3$

6. $(2c^2 + c + 1)(2c^5 + 8c^4 - 6c^3)$
$= 4c^7 + 18c^6 - 2c^5 + 2c^4 - 6c^3$

7. $(p^5 - 4p^4 + 5p^3)(p^3 - 4p^2 - 9p)$
$= p^8 - 8p^7 + 12p^6 + 16p^5 - 45p^4$

8. $(-4a^3 - 6a^2 + 7a)(5a^4 - 8a^3 - 8a^2)$
$= -20a^7 + 2a^6 + 115a^5 - 8a^4 - 56a^3$

9. $(9y^2 + 7y - 4)(2y^4 - 9y^3 + 7y^2)$
$= 18y^6 - 67y^5 - 8y^4 + 85y^3 - 28y^2$

10. $(-4f^2 + 2f + 9)(-8f^4 - 2f^3 - 9f^2)$
$= 32f^6 - 8f^5 - 40f^4 - 36f^3 - 81f^2$