Multiplying a Monomial by a Trinomial (F)

Simplify each expression.

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

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

3. $g(3g^3 + 2g^2 - g)$

4. $-2g(2g^2 + 7g - 9)$

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

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

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

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

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

10. $5d^2(-2d^5 - 9d^4 - 8d^3)$

Multiplying a Monomial by a Trinomial (F) Answers

Simplify each expression.

1. $z^2(-4z^5 + 6z^4 - 2z^3)$
$= -4z^7 + 6z^6 - 2z^5$

2. $6q^4(-9q^5 + 6q^4 - 4q^3)$
$= -54q^9 + 36q^8 - 24q^7$

3. $g(3g^3 + 2g^2 - g)$
$= 3g^4 + 2g^3 - g^2$

4. $-2g(2g^2 + 7g - 9)$
$= -4g^3 - 14g^2 + 18g$

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

6. $8f^2(7f^2 + 7f - 4)$
$= 56f^4 + 56f^3 - 32f^2$

7. $-8k^5(7k^3 + 8k^2 + 2k)$
$= -56k^8 - 64k^7 - 16k^6$

8. $9t^5(t^2 + 2t - 5)$
$= 9t^7 + 18t^6 - 45t^5$

9. $-8s^4(-9s^4 + 2s^3 + 2s^2)$
$= 72s^8 - 16s^7 - 16s^6$

10. $5d^2(-2d^5 - 9d^4 - 8d^3)$
$= -10d^7 - 45d^6 - 40d^5$