

Polynomial Quiz

Simplify each expression.

1) $(2a^2 + 8a^4) + (a^4 - 3a^2)$
 $9a^4 - a^2$

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

3) $(-2b^3 - 6b^2 - 6b) - (7b - 4b^3 + 3b^2)$
 $2b^3 - 9b^2 - 13b$

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

5) $(-7x + x^2 + 6x^3) - (-4x^3 + 8x + 5x^4)$
 $-5x^4 + 10x^3 + x^2 - 15x$

Find each product.

6) $6x^3(2x - 2)$
 $12x^4 - 12x^3$

7) $3b(8b^2 + 5b - 6)$
 $24b^3 + 15b^2 - 18b$

8) $(8a + 6)(3a - 6)$
 $24a^2 - 30a - 36$

9) $(3x - 4)(5x - 3)$
 $15x^2 - 29x + 12$

10) $(7m + 5n)(3m - 4n)$
 $21m^2 - 13mn - 20n^2$