

Notes: Multiplying by a Monomial

QUESTIONS	NOTES:
	<p>When multiplying by a monomial... <u>Distribute</u>.</p> <p>Make sure you are following the exponent rules!</p> <p><u>Multiply</u> the coefficients and <u>ADD</u> the exponents.</p>
<p>Find the product:</p> <p>*Write in Standard Form</p>	<p>1. $6a(4a^3 + 3a^4) = \underline{18a^5 + 24a^4}$</p> <p style="margin-left: 40px;">$4a^3$ $3a^4$</p> <p style="margin-left: 20px;">$6a \cdot \begin{array}{ c c } \hline 24a^4 & 18a^5 \\ \hline \end{array}$</p> <p>2. $7f(3f^2 - f) = \underline{21f^3 - 7f^2}$</p> <p style="margin-left: 40px;">$3f^2$ $-f$</p> <p style="margin-left: 20px;">$7f \cdot \begin{array}{ c c } \hline 21f^3 & -7f^2 \\ \hline \end{array}$</p> <p>3. $-5x^2(3x^4 + 2x - 1) = \underline{-15x^6 - 10x^3 + 5x^2}$</p> <p style="margin-left: 40px;">$3x^4$ $2x$ -1</p> <p style="margin-left: 20px;">$-5x^2 \cdot \begin{array}{ c c c } \hline -15x^6 & -10x^3 & 5x^2 \\ \hline \end{array}$</p> <p>4. $2h^3(8h^2 + h - 7) = \underline{16h^5 + 2h^4 - 14h^3}$</p> <p style="margin-left: 40px;">$8h^2$ h -7</p> <p style="margin-left: 20px;">$2h^3 \cdot \begin{array}{ c c c } \hline 16h^5 & 2h^4 & -14h^3 \\ \hline \end{array}$</p>

Summary: _____

7-2 Practice

Form G

Multiplying

Simplify each product.

1. $2x(x+8)$

$$2x^2 + 16x$$

2. $(n+7)5n$

$$5n^2 + 35n$$

3. $6h(7+h)$

$$42h + 6h^2$$

$$6h^2 + 42h$$

4. $-b(b-10)$

$$-b^2 + 10b$$

5. $-3c(8+2c)$

$$-24c - 6c^2$$

$$-6c^2 - 24c$$

6. $y(2-3y+6)$

$$2y - 3y^2 + 6y$$

$$-3y^2 + 8y$$

7. $4t(6t+2)$

$$24t^2 + 8t$$

8. $-m(4-8m+1)$

$$-4m + 8m^2 - m$$

$$8m^2 - 5m$$

9. $7j(-8j-3)$

$$-56j^2 - 21j$$

Simplify. Write in standard form.

10. $-3x(4x^2 - 6x + 12)$

$$-12x^3 + 18x^2 - 36x$$

11. $-7y^2(-4y^3 + 6y)$

$$28y^5 - 42y^3$$

12. $9a(-3a^2 + a - 5)$

$$-27a^3 + 9a^2 - 45a$$

13. $p(p+4) - 2p(p-8)$

$$p^2 + 4p - 2p^2 + 16p$$

$$-p^2 + 20p$$

14. $t(t+4) + t(4t^2 - 2)$

$$t^2 + 4t + 4t^3 - 2t$$

$$4t^3 + t^2 + 2t$$

15. $6c(2c^2 - 4) - c(8c)$

$$12c^3 - 24c - 8c^2$$

$$12c^3 - 8c^2 - 24c$$

16. $-5m(2m^3 - 7m^2 + m)$

$$-10m^4 + 35m^3 - 5m^2$$

17. $2q(q+1) - q(q-1)$

$$2q^2 + 2q - q^2 + q$$

$$q^2 + 3q$$

18. $-n^2(-6n^2 + 2n)$

$$6n^4 - 2n^3$$