

The Weekly Rigor

No. 305

“A mathematician is a machine for turning coffee into theorems.”

April 25, 2020

10 Problems in Multiplying a Monomial by a Polynomial

PROBLEMS

Find each indicated product.

1. $(a - b)c$.

2. $3a(7a^2 - 3b)$.

3. $3ac(6ax - 5c^2y)$.

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

5. $-6a^2x(5ax^2 - 3x^3y)$.

6. $-5(11m^2 - 3)$.

7. $ab(a^2 - 2ab + b^2)$.

8. $4mx\left(5x^3 - 7m^3x + \frac{7}{2}\right)$.

9. $ab^2c^3d^4(ab + cd + ef)$.

10. $3x^2y(6y^2 - 5x^2y^4)$.

ANSWERS

1. $ac - bc$	2. $21a^3 - 9ab$
3. $18a^2cx - 15ac^3y$	4. $-6m^3n + 8mn^4 - 14mn$
5. $-30a^3x^3 + 18a^2x^4y$	6. $-55m^2 + 15$
7. $a^3b - 2a^2b^2 + ab^3$	8. $20mx^4 - 28m^4x^2 + 14mx$
9. $a^2b^3c^3d^4 + ab^2c^4d^5 + ab^2c^3d^4ef$	10. $18x^2y^3 - 15x^4y^5$

“Only he who never plays, never loses.”