

Name _____

Date _____ Pd. _____

Notes: Multiplying a Polynomial by a Monomial**Example 1** Find $-3x^2(4x^2 + 6x - 8)$.**Horizontal Method****Vertical Method****Example 2** Simplify $-2(4x^2 + 5x) - x(x^2 + 6x)$.**Example** Solve $4(n - 2) + 5n = 6(3 - n) + 19$.

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Exit Card: Multiplying a Polynomial by a Monomial

Tom uses a phone card. The charge is 3 cents per minute plus a 39-cent connection fee. If Tom talks for x -minutes, his total cost, including the connection fee, is given by the function $C(x) = 3x + 39$ cents. What expression represents the average cost Tom pays for each minute of a call that lasts x minutes?

F. $x + 3x + 39$

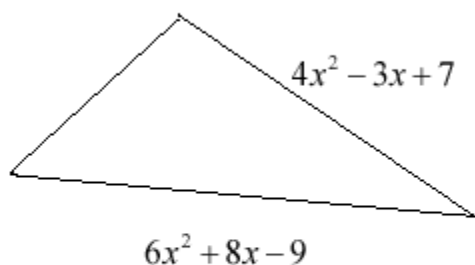
G. $x(3x + 39)$

H. $\frac{x}{3x + 39}, x \neq -13$

J. $\frac{3x + 39}{x}, x \neq 0$

BCR

Look at the triangle below:



- If the perimeter of this triangle is $15x^2 - 2x - 10$, what polynomial represents the length of the third side? Use mathematics to explain how you determined your answer. Use words, symbols, or both in your explanation.

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Homework: Pages 446 – 448 (15, 19, 29, 30, 37, 41, 51, 58, 59, 64)

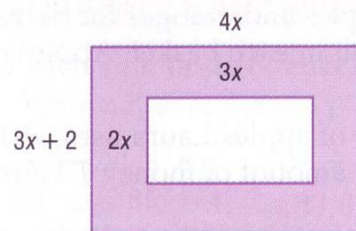
15. $r(5r + r^2)$

19. $7ag(g^3 + 2ag)$

29. $d(-2d + 4) + 15d$

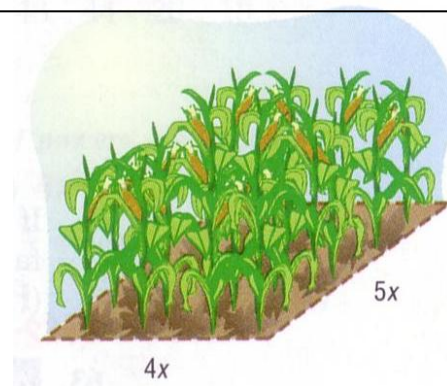
30. $-x(4x^2 - 2x) - 5x^3$

37. Find the area of the shaded region in simplest form.



41. Solve $4(3p + 9) - 5 = -3(12p - 5)$

51. A gardener plants corn in a garden with a length-to-width ratio of 5:4. Next year, he plans to increase the garden's area by increasing its length by 12 feet. Write an expression for this new area.



Laura is making baskets of apples and oranges for homeless shelters. She wants to place a total of 10 pieces of fruit in each basket. Apples cost 25¢ each, and oranges cost 20¢ each.

58. If a represents the number of apples Laura uses, write a polynomial model in simplest form for the total amount of money T Laura will spend on the fruit for each basket.
59. If Laura uses 4 apples in each basket, find the total cost for fruit.

64. Simplify $\left[(3x^2 - 2x + 4) - (x^2 + 5x - 2)\right](x + 2)$

A $2x^3 + 7x^2 + 8x + 4$

B $2x^3 - 3x^2 - 8x + 12$

C $4x^3 + 11x^2 + 8x + 4$

D $-4x^3 - 11x^2 - 8x - 4$