

Review Multiplying Polynomials, GCF, and Zero Product Property.

Multiply and Simplify.

1)  $-3x(2x^2 - 4x + 5)$

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2)  $(y+3)(2y-4)$


3)  $(4-2p)(p^2+3p-1)$


Find the GCF for each pair of monomials.

4) **18, 45**

5)  **$36x^2, 54x^3$**

6)  **$54xy^3, 27x^2y^2$**

Write the polynomial in factored form.

7)  **$24a^2b - 12a^2 + 8ab^2$**

8)  **$8x^3y^4 + 7x^3y^3 + 4x^5$**

9)  **$-80mn - 72m + 72n$**

10)  **$18m^4n^3 - 27m^2n^2 - 45m^2n$**

Solve.

11)  **$(2x-3)(x+4)=0$**

12)  **$2x(x-3)(3x-1)(x-2)=0$**

Find the area of a rectangle that has a length of  $(x+3)$  feet and a width of  $(2x-4)$  feet.