

DISTRIBUTIVITY

LAST NAME	FIRST NAME	DATE
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1 (10 points). Simplify each expression by removing parentheses and/or combining similar terms. Show all algebraic work.

(a) $(7x + 5y - 4) - (3y - 7x + 1) =$

(b) $(x^2 - 6x) - (x - 3) + (-2x^2 - 2) =$

(c) $5(2x^2 - 3x - 1) =$

(d) $4(x - 5) - 3(2 - x) =$

(e) $(x + 2)(x - 2) =$

(f) $(x - 5)(x - 5) =$

(g) $(2x - 5)(3x - 7) =$

(h) $(x + 4)^2 - (x - 3)^2 =$

(i) $(a + 3)(a - 3)(a^2 + 9) =$

(j) $(a + b - 6)(a - b + 7) =$

2 (5 points). Factor out the greatest common factor in each expression:

(a) $10x + 24 =$

(b) $5t^2 + t =$

(c) $-10y^2 - 5y^3 =$

(d) $20a^2b^2 + 15ab =$

(e) $3x^6y^2 + 3x^5y^7 =$

3 (4 points). Simplify each expression by removing parentheses and/or combining similar terms. Show all algebraic work.

(a) $(c - d)^3 =$

(b) $(x - 1)(x^6 + x^5 + x^4 + x^3 + x^2 + x + 1) =$

(c) $(2 - 3y)^4 =$

(d) $(x^3 - 2x^2 + 3x + 4)(4x^3 + 3x^2 - 2x + 1) =$