Beginning Algebra	**Name:** _____
Study Guide 15	**Class:** _____
Due Date: _____	**Score:** _____

No Work $\Leftrightarrow$ No Points

Use Pencil Only $\Leftrightarrow$ Be Neat & Organized

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1. **Find the missing factor:**

(a) (2 points) $5x^3(\quad ?\quad) = 15x^5 - 50x^4 - 5x^3$

(a) _____

(b) (2 points) $2x(\quad ?\quad) - 5(\quad ?\quad) = (2x - 5)(3x^2 - 4)$

(b) _____

(c) (2 points) $(3x + 4)(\quad ?\quad) = 6x^2 - 7x - 20$

(c) _____

(d) (2 points) $(x - 11)(\quad ?\quad) = x^2 - 121$

(d) _____

(e) (2 points) $(2x + 5)(\quad ?\quad) = 8x^3 + 125$

(e) _____

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2. Factor Completely:

(a) (2 points) $14x^3y^2 - 49xy^5$

(a) _____

(b) (2 points) $7x^3 + 5x^2 - 14x - 10$

(b) _____

(c) (2 points) $x^3 - 2x^2 - 24x$

(c) _____

(d) (2 points) $5x^2 + 9x + 4$

(d) _____

(e) (2 points) $x^3 - 49x$

(e) _____

(f) (2 points) $2x^3 - 16y^3$

(f) _____

(g) (2 points) $100x^2 - 180x + 81$

(g) _____

(h) (2 points) $2x^3 - 10x^2 + 50x$

(h) _____

(i) (3 points) $3x^3 + 8x^2 + 3x + 8$

(i) _____

(j) (3 points) $x^5 + 3x^4 - 54x^3$

(j) _____

(k) (3 points) $4x^2 - 9xy + 5y^2$

(k) _____

(l) (3 points) $10x^3 - 250xy^4$

(l) _____

(m) (3 points) $5x^4y + 40xy^4$

(m) _____

(n) (3 points) $25x^2 + 50xy + y^2$

(n) _____

(o) (3 points) $25x^2(5x - 6) - 36(5x - 6)$

(o) _____

(p) (3 points) $9x^2 + 6x + 1 - 49y^2$

(p) _____