Math 1155 Algebra Pretest   Name:

These questions are all taken from your *Algebra Review* text; the page and problem numbers given here are from the third edition.

(p. 63, Ex 2(a)) Evaluate $[(-2)^3]^2$.

(p. 77, #51) Give the degree of the polynomial $xy^2 - 1 + x$.

(p. 77, #63) Evaluate the polynomial $5y^3 - 3y^2 + 4$ for the value $y = 2$.

(p. 93) Perform the indicated operations. Express your answer as a polynomial.
(#89) $(x - y)^2 - (x + y)^2$

(#95) $(x - y)(x^2 + xy + y^2)$

(p. 120) Completely factor each polynomial.
(#17) $9x^2 - 16$.

(#19) $x^2 + 2x + 1$.

(p. 146, #27) Reduce to lowest terms: $\frac{y^2 - 25}{2y - 10}$.

(p. 147, #53) Evaluate the expression $\frac{x^2 - 4x + 4}{x^2 - 25}$ for the value $x = -4$.

(p. 147, #67) Determine which of the values must be excluded from the domain of the variable in the expression $\frac{x^2+5x-10}{x^3-x}$. (There may be more than one answer.)

$$\text{(a) } x = 3 \qquad \text{(b) } x = 1$$
$$\text{(c) } x = 0 \qquad \text{(d) } x = -1$$

(p. 153, #49) Simplify $\frac{\frac{8x}{x^2-1}}{\frac{10x}{x+1}}$.

(p. 187, #23) Simplify $\frac{2^3 \cdot 3^2}{2 \cdot 3^{-2}}$.

(p. 198, #65) Perform the indicated operations and simplify: $(\sqrt{3} - \sqrt{2})(\sqrt{3} + \sqrt{2})$.

(p. 206, #27) Evaluate $\sqrt[3]{8(1+x)^3}$.

(p. 206, #47) Simplify $\sqrt{\frac{4}{9x^2y^4}}$.

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