

Polynomial Operations

1. Perform the indicated operation to write each polynomial in standard form.

a) $(x^2 - 3)(x^2 + 3x - 1)$

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

c) $\frac{x^3 - 8}{x - 2}$

d) $(x + 1)(x - 2)(x + 3)$

e) $(x + 1) - (x - 2) - (x + 3)$

f) $(x + 2)(2x^2 - 5x + 7)$

g)
$$\frac{x^3 - 2x^2 - 65x + 18}{x - 9}$$

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

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1. Perform the indicated operation to write each polynomial in standard form.

a) $(x^2 - 3)(x^2 + 3x - 1)$

$x^4 + 3x^3 - 4x^2 - 9x + 3$

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

$4x^2 - 5x - 2$

c) $\frac{x^3 - 8}{x - 2}$

$x^2 + 2x + 4$

d) $(x + 1)(x - 2)(x + 3)$

$x^3 + 2x^2 - 5x - 6$

e) $(x + 1) - (x - 2) - (x + 3)$

$-x$

f) $(x + 2)(2x^2 - 5x + 7)$

$2x^3 - x^2 - 3x + 14$

g) $\frac{x^3 - 2x^2 - 65x + 18}{x - 9}$

$x^2 + 7x - 2$

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

$-x^2 - 2x$