# Answers Page 88 # 4-6,8,11,12

**4.** **a)** $9a - 5c + 5$
**b)** $2x^2 + 3x + 4y + z$
**c)** $3x - 3y + 1$
**d)** $3x^2 - 9x - 3$
**e)** $2x^2 - 5xy + 2y^2$
**f)** $5x^2 - y^2 - 1$

**5.** **a)** $m - 4n + p + 7$
**b)** $-8m - 4q + 1$
**c)** $-a^3 + 4a^2 - 2a$
**d)** $-2m^2 - 5mn + 15n^2$
**e)** $-x^2 + 4y^2 + 15$
**f)** $3x^2 + 50$

**6.** **a)** $11x - 7y$
**b)** $4x^2 - 16x - 3$
**c)** $4x^2$
**d)** $2x + xy - 4y + yz$
**e)** $\frac{3}{10}x + \frac{4}{3}y$
**f)** $\frac{1}{12}x + \frac{1}{4}y + 1$

**8.** **a)** $f(x) = 2x^2 + 4x - 9$ and $g(x) = 2x^2 + 4x - 5 \therefore f(x) \neq g(x)$
**b)** $s_1(1) = 27$ and $s_1(1) = 9 \therefore s_1(t) \neq s_2(t)$
**c)** e.g., if $x = -1$, then $y_1 = 2$ and $y_2 = 0$
$\therefore y_1 \neq y_2$
**d)** $f(n) = 2n^2 + 2n - 9$ and $g(n) = 2n^2 + 2n - 9$
$\therefore f(n) = g(n)$
**e)** $p = 1, q = 1, y_1 = 9; y_2 = 5 \therefore y_1 \neq y_2$
**f)** $f(2) = 6$
$g(2) = 14$
$\therefore f(m) \neq g(m)$

**11.** $3x + 3y + 2$

**12.** **a)** $P(x) = -50x^2 + 2350x - 9500$ **b)** \$11 500