

(C1-1.3a) Name:

Homework Questions 3 – Expanding Brackets

1. Simplify the following by removing the single brackets

a) $4(x + 6)$

$$4x + 24$$

b) $x(x + 1)$

$$x^2 + x$$

c) $5(x - 2) - 3(x + 6)$

$$2x - 28$$

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

$$9x^2 - x$$

e) $6yx^2 - 5xy(2x + 3y)$

$$- 4x^2y - 15xy^2$$

f) $2x^2y^3(3x + 4y) + 5x^2(y^3 - y^4)$

$$6x^3y^3 + 5x^2y^3 + 3x^2y^4$$

2. Expand and simplify the following quadratics fully

a) $(x - 2)(x - 4)$

$$x^2 - 6x + 8$$

b) $3(x + 4)(x - 2)$

$$3x^2 + 6x - 24$$

c) $(x + 4)^2$

$$x^2 + 8x + 16$$

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

$$- x^2 - 14x + 9$$