

Year 7 Algebraic Techniques Revision

Question 1 – Adding/Subtracting by Collecting Like Terms

Simplify the following:

a. $5x - 3x + 9x$

b. $4b - 3a + b - 5a$

c. $x^2 - 3x + 5x^2$

d. $ab - bc + 2ba - 3cb$

e. $4xy + 5x^2y - 6yx$

Question 2 – Multiplying and Dividing

Simplify the following:

a. $4a \times 3b \times 2c$

b. $8x \times x$

c. $-3a \times 5b$

d. $-2m \times -3m$

e. $9x \div x$

f. $24x^2 \div 6x$

g. $12xyz \div 3y$

h. $6x \times 4y \div 8xy$

Question 3 – Expanding Brackets

Expand the following expressions.

a. $3(x + 2)$

b. $m(2m + 5)$

c. $7(5x - y)$

d. $3(4a - 3b)$

e. $-2(5a - b)$

f. $-4k(2k - 5)$

g. $-3b(2a + 9b)$

Question 4 – Substitution

Given $a = 5$, $b = 1$, $c = 2$, evaluate the following:

a. $a + b - c$

b. $4c - c^2$

c. $6a \div c$

d. $-3abc$

e. $a(2a + c)$