

Chapter 3

Algebraic Expression

Table 3-1: Solution to Example 1

	Expression	Number of Terms	List
a)	$a - 3b$	2	a and $-3b$
b)	$2uv + y^2$	2	$2uv$ and y^2
c)	$3 - xyz$	2	3 and $-xyz$
d)	$ax^2 + bx + c$	3	ax^2 , bx and c
e)	$m^2 + 3xy - 5z^2n + 10$	4	m^2 , $3xy$, $-5z^2n$ and 10

Table 3-2: Rules of multiplying and dividing negative numbers

	Operation	Result	Example
Multiplication	$(positive) \times (positive)$	positive	$(3) \times (a) = 3a$
	$(positive) \times (negative)$	negative	$(3) \times (-a) = -3a$
	$(negative) \times (positive)$	negative	$(-5a) \times (b) = -5ab$
	$(negative) \times (negative)$	positive	$(-5a) \times (-2b) = 10ab$
Division	$(positive) \div (positive)$	positive	$(30a) \div (6b) = \frac{5a}{b}$
	$(positive) \div (negative)$	negative	$(30a) \div (-6b) = -\frac{5a}{b}$
	$(negative) \div (positive)$	negative	$(-30a) \div (6b) = -\frac{5a}{b}$
	$(negative) \div (negative)$	positive	$(-30a) \div (-6b) = \frac{5a}{b}$

Table 3-3: Alternative method of opening a double brackets

	p	$+q$
r	pr	$+qr$
$+s$	$+ps$	$+qs$

Table 3-4: Solution to Example 9(a)

	x	$-2y$	$3z$
$2x$	$2x^2$	$-4xy$	$+6xz$
$-3y$	$-3xy$	$+6y^2$	$-9yz$

Table 3-5: Solution to Example 9(b)

	$3x^2$	$-x$	5
x^2	$3x^4$	$-x^3$	$+5x^2$
$-2x$	$-6x^3$	$+2x^2$	$-10x$
3	$+9x^2$	$-3x$	$+15$

Table 3-6: Formulas (dependent and independent variables)

Equation or Formula	Dependent variable	Independent variable	Constant
$y = mx + c$	y	x	m, c
$F = kx$	F	x	k
$V = IR$	V	I	R
$T = 2\pi \sqrt{\frac{l}{g}}$	T	l	$2, \pi, g$
$T = 2\pi \sqrt{\frac{m}{k}}$	T	m	$2, \pi, k$
$f = \frac{1}{2\pi\sqrt{LC}}$	f	L, C	$2, \pi$



Thank You

