



Multiplying Polynomials - Box Method

Name _____

Score _____

BM:10

Multiply the polynomials using box method.

1) $(5m + 2)(m^2 + 3m - 4)$

	m^2	$3m$	-4
$5m$			
2			

2) $(a - b)(a^2 - b^2 - 1)$

	a^2	$-b^2$	-1
a			
b			

3) $(g - 1)(2g^2 - g - 7)$

	$2g^2$	$-g$	-7
g			
-1			

4) $(w + 3)(w^3 + 3w^2 - w)$

	w^3	$3w^2$	$-w$
w			
3			

5) $(3x - y)(x + y + z)$

	x	y	z
$3x$			
$-y$			

6) $(n^2 - 3n)(n^2 - 5n + 6)$

	n^2	$-5n$	6
n^2			
$-3n$			



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Answer key

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Multiply the polynomials using box method.

1) $(5m + 2)(m^2 + 3m - 4)$

	m^2	$3m$	-4
$5m$	$5m^3$	$15m^2$	$-20m$
2	$2m^2$	$6m$	-8

$5m^3 + 17m^2 - 14m - 8$

2) $(a - b)(a^2 - b^2 - 1)$

	a^2	$-b^2$	-1
a	a^3	$-ab^2$	$-a$
b	a^2b	$-b^3$	$-b$

$a^3 - ab^2 + a^2b - b^3 - a - b$

3) $(g - 1)(2g^2 - g - 7)$

	$2g^2$	$-g$	-7
g	$2g^3$	$-g^2$	$-7g$
-1	$-2g^2$	g	7

$2g^3 - 3g^2 - 6g + 7$

4) $(w + 3)(w^3 + 3w^2 - w)$

	w^3	$3w^2$	$-w$
w	w^4	$3w^3$	$-w^2$
3	$3w^3$	$9w^2$	$-3w$

$w^4 + 6w^3 + 8w^2 - 3w$

5) $(3x - y)(x + y + z)$

	x	y	z
$3x$	$3x^2$	$3xy$	$3xz$
$-y$	$-xy$	$-y^2$	$-yz$

$3x^2 + 2xy + 3xz - y^2 - yz$

6) $(n^2 - 3n)(n^2 - 5n + 6)$

	n^2	$-5n$	6
n^2	n^4	$-5n^3$	$6n^2$
$-3n$	$-3n^3$	$15n^2$	$-18n$

$n^4 - 8n^3 + 21n^2 - 18n$