



Multiplying Polynomials - Box Method

Name _____

Score _____

BM:11

Multiply the polynomials using box method.

1) $(p - q)(2p + 3q - r)$

	2p	3q	-r
p			
-q			

2) $(3u^3 + 5)(u^2 + u + 7)$

	u^2	u	7
$3u^3$			
5			

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

	t^2	-3t	4
t^2			
t			

4) $(d - 4)(3d^2 - 5d - 2)$

	$3d^2$	-5d	-2
d			
-4			

5) $(4h^3 - h^2)(-h^3 + 2h^2 - 5h)$

	$-h^3$	$2h^2$	-5h
$4h^3$			
$-h^2$			

6) $(xy + z^2)(xy + z^2 - 1)$

	xy	z^2	-1
xy			
z^2			



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Answer key

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Multiply the polynomials using box method.

1) $(p - q)(2p + 3q - r)$

	2p	3q	-r
p	$2p^2$	$3pq$	$-pr$
-q	$-2pq$	$-3q^2$	qr

$2p^2 + pq - pr - 3q^2 + qr$

2) $(3u^3 + 5)(u^2 + u + 7)$

	u^2	u	7
$3u^3$	$3u^5$	$3u^4$	$21u^3$
5	$5u^2$	$5u$	35

$3u^5 + 3u^4 + 21u^3 + 5u^2 + 5u + 35$

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

	t^2	-3t	4
t^2	t^4	$-3t^3$	$4t^2$
t	t^3	$-3t^2$	$4t$

$t^4 - 2t^3 + t^2 + 4t$

4) $(d - 4)(3d^2 - 5d - 2)$

	$3d^2$	-5d	-2
d	$3d^3$	$-5d^2$	$-2d$
-4	$-12d^2$	$20d$	8

$3d^3 - 17d^2 + 18d + 8$

5) $(4h^3 - h^2)(-h^3 + 2h^2 - 5h)$

	$-h^3$	$2h^2$	-5h
$4h^3$	$-4h^6$	$8h^5$	$-20h^4$
$-h^2$	h^5	$-2h^4$	$5h^3$

$-4h^6 + 9h^5 - 22h^4 + 5h^3$

6) $(xy + z^2)(xy + z^2 - 1)$

	xy	z^2	-1
xy	x^2y^2	xyz^2	$-xy$
z^2	xyz^2	z^4	$-z^2$

$x^2y^2 + 2xyz^2 + z^4 - xy - z^2$