



# Multiplying Polynomials - Box Method

Name \_\_\_\_\_

Score \_\_\_\_\_

BM:04

Multiply the polynomials using box method.

1)  $4t^2(2t^2 - t + 2) =$

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

2)  $-3g(4g + h - 1) =$

	$4g$	$h$	$-1$
$-3g$			

3)  $x^2(x - y - z) =$

	$x$	$-y$	$-z$
$x^2$			

4)  $10(k^2 + 3k + 4) =$

	$k^2$	$3k$	$4$
$10$			

5)  $7w(w^3 - 3w^2 - w) =$

	$w^3$	$-3w^2$	$-w$
$7w$			

6)  $5a(b^2 + 6c^2 + 5) =$

	$b^2$	$6c^2$	$5$
$5a$			

7)  $-4(-mn - 2m - 8n) =$

	$-mn$	$-2m$	$-8n$
$-4$			

8)  $9t^3(5t^3 - t^2 + 3t) =$

	$5t^3$	$-t^2$	$3t$
$9t^3$			



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## Answer key

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Multiply the polynomials using box method.

1)  $4t^2(2t^2 - t + 2) = 8t^4 - 4t^3 + 8t^2$

	$2t^2$	$-t$	$2$
$4t^2$	$8t^4$	$-4t^3$	$8t^2$

2)  $-3g(4g + h - 1) = 12g^2 - 3gh + 3g$

	$4g$	$h$	$-1$
$-3g$	$12g^2$	$-3gh$	$3g$

3)  $x^2(x - y - z) = x^3 - x^2y - x^2z$

	$x$	$-y$	$-z$
$x^2$	$x^3$	$-x^2y$	$-x^2z$

4)  $10(k^2 + 3k + 4) = 10k^2 + 30k + 40$

	$k^2$	$3k$	$4$
$10$	$10k^2$	$30k$	$40$

5)  $7w(w^3 - 3w^2 - w) = 7w^4 - 21w^3 - 7w^2$

	$w^3$	$-3w^2$	$-w$
$7w$	$7w^4$	$-21w^3$	$-7w^2$

6)  $5a(b^2 + 6c^2 + 5) = 5ab^2 + 30ac^2 + 25a$

	$b^2$	$6c^2$	$5$
$5a$	$5ab^2$	$30ac^2$	$25a$

7)  $-4(-mn - 2m - 8n) = 4mn + 8m + 32n$

	$-mn$	$-2m$	$-8n$
$-4$	$4mn$	$8m$	$32n$

8)  $9t^3(5t^3 - t^2 + 3t) = 45t^6 - 9t^5 + 27t^4$

	$5t^3$	$-t^2$	$3t$
$9t^3$	$45t^6$	$-9t^5$	$27t^4$