



# Multiplying Polynomials - Box Method

Name \_\_\_\_\_

Score \_\_\_\_\_

BM:06

Multiply the polynomials using box method.

1)  $8(5d^2 - d + 6) =$

	$5d^2$	$-d$	$6$
$8$			

2)  $-2x(-y^3 + x^2 + 1) =$

	$-y^3$	$x^2$	$1$
$-2x$			

3)  $5k(3k^2 + 4k - 7) =$

	$3k^2$	$4k$	$-7$
$5k$			

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

	$3g^2$	$2gh$	$-h^2$
$g^2h$			

5)  $8p(-5q + r - 2s) =$

	$-5q$	$r$	$-2s$
$8p$			

6)  $6z^3(z^4 + z^2 + 3z) =$

	$z^4$	$z^2$	$3z$
$6z^3$			

7)  $-u(-2u - 3v - w) =$

	$-2u$	$-3v$	$-w$
$-u$			

8)  $9b^2(b^3 + 4b^2 + 7b) =$

	$b^3$	$4b^2$	$7b$
$9b^2$			



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## Answer key

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Multiply the polynomials using box method.

1)  $8(5d^2 - d + 6) = 40d^2 - 8d + 48$

	$5d^2$	$-d$	$6$
$8$	$40d^2$	$-8d$	$48$

2)  $-2x(-y^3 + x^2 + 1) = 2xy^3 - 2x^3 - 2x$

	$-y^3$	$x^2$	$1$
$-2x$	$2xy^3$	$-2x^3$	$-2x$

3)  $5k(3k^2 + 4k - 7) = 15k^3 + 20k^2 - 35k$

	$3k^2$	$4k$	$-7$
$5k$	$15k^3$	$20k^2$	$-35k$

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

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

5)  $8p(-5q + r - 2s) = -40pq + 8pr - 16ps$

	$-5q$	$r$	$-2s$
$8p$	$-40pq$	$8pr$	$-16ps$

6)  $6z^3(z^4 + z^2 + 3z) = 6z^7 + 6z^5 + 18z^4$

	$z^4$	$z^2$	$3z$
$6z^3$	$6z^7$	$6z^5$	$18z^4$

7)  $-u(-2u - 3v - w) = 2u^2 + 3uv + uw$

	$-2u$	$-3v$	$-w$
$-u$	$2u^2$	$3uv$	$uw$

8)  $9b^2(b^3 + 4b^2 + 7b) = 9b^5 + 36b^4 + 63b^3$

	$b^3$	$4b^2$	$7b$
$9b^2$	$9b^5$	$36b^4$	$63b^3$