Multiplying Polynomials - Box Method

Name _____

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BM:03

Multiply the polynomials using box method.

1) $3m(2n^2 - 5) =$

	$2n^2$	-5
$3m$		

2) $6k^3(k^2 + 2k) =$

	k^2	$2k$
$6k^3$		

3) $ab(-2a^2 - b^3) =$

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

4) $-x^3y(x - y) =$

	x	$-y$
$-x^3y$		

5) $7w(2w + 9) =$

	$2w$	9
$7w$		

6) $4p^2q(p^2q^2 + 3p) =$

	p^2q^2	$3p$
$4p^2q$		

7) $-8(3z - 6) =$

	$3z$	-6
-8		

8) $11(-5g^2 + 4h) =$

	$-5g^2$	$4h$
11		

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Answer key

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Multiply the polynomials using box method.

1) $3m(2n^2 - 5) = \mathbf{6mn^2 - 15m}$

	$2n^2$	-5
$3m$	$\mathbf{6mn^2}$	$\mathbf{-15m}$

2) $6k^3(k^2 + 2k) = \mathbf{6k^5 + 12k^4}$

	k^2	$2k$
$6k^3$	$\mathbf{6k^5}$	$\mathbf{12k^4}$

3) $ab(-2a^2 - b^3) = \mathbf{-2a^3b - ab^4}$

	$-2a^2$	$-b^3$
ab	$\mathbf{-2a^3b}$	$\mathbf{-ab^4}$

4) $-x^3y(x - y) = \mathbf{-x^4y + x^3y^2}$

	x	$-y$
$-x^3y$	$\mathbf{-x^4y}$	$\mathbf{x^3y^2}$

5) $7w(2w + 9) = \mathbf{14w^2 + 63w}$

	$2w$	9
$7w$	$\mathbf{14w^2}$	$\mathbf{63w}$

6) $4p^2q(p^2q^2 + 3p) = \mathbf{4p^4q^2 + 12p^3q}$

	p^2q^2	$3p$
$4p^2q$	$\mathbf{4p^4q^3}$	$\mathbf{12p^3q}$

7) $-8(3z - 6) = \mathbf{-24z + 48}$

	$3z$	-6
-8	$\mathbf{-24z}$	$\mathbf{48}$

8) $11(-5g^2 + 4h) = \mathbf{-55g^2 + 44h}$

	$-5g^2$	$4h$
11	$\mathbf{-55g^2}$	$\mathbf{44h}$