



Multiplying Trinomials - Box Method

Name _____

Score _____

BM:17

Multiply the polynomials using box method.

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

	w^4	$5w^3$	$4w^2$
$3w^3$			
$-w^2$			
$-w$			

3) $(z^2 - 8z + 9)(2z^2 + 3z - 4)$

	$2z^2$	$3z$	-4
z^2			
$-8z$			
9			

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

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

2) $(-5d^2 - 8d + 7)(-7d^2 - 6d - 5)$

	$-7d^2$	$-6d$	-5
$-5d^2$			
$-8d$			
7			

4) $(h^5 + 3h^4 - h^3)(9h^3 - h^2 + 6h)$

	$9h^3$	$-h^2$	$6h$
h^5			
$3h^4$			
$-h^3$			

6) $(6m^2 - 2m - 1)(m^2 + 3m + 9)$

	m^2	$3m$	9
$6m^2$			
$-2m$			
-1			



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Answer key

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Multiply the polynomials using box method.

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

	w^4	$5w^3$	$4w^2$
$3w^3$	$3w^7$	$15w^6$	$12w^5$
$-w^2$	$-w^6$	$-5w^5$	$-4w^4$
$-w$	$-w^5$	$-5w^4$	$-4w^3$

$3w^7 + 14w^6 + 6w^5 - 9w^4 - 4w^3$

3) $(z^2 - 8z + 9)(2z^2 + 3z - 4)$

	$2z^2$	$3z$	-4
z^2	$2z^4$	$2z^3$	$-4z^2$
$-8z$	$-16z^3$	$-24z^2$	$32z$
9	$18z^2$	$27z$	-36

$2z^4 - 14z^3 - 10z^2 + 59z - 36$

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

	$-3k^4$	$-k^3$	$2k^2$
$4k^4$	$-12k^8$	$-4k^7$	$8k^6$
$4k^3$	$-12k^7$	$-4k^6$	$8k^5$
$5k^2$	$-15k^6$	$-5k^5$	$10k^4$

$-12k^8 - 16k^7 - 11k^6 + 3k^5 + 10k^4$

2) $(-5d^2 - 8d + 7)(-7d^2 - 6d - 5)$

	$-7d^2$	$-6d$	-5
$-5d^2$	$35d^4$	$30d^3$	$25d^2$
$-8d$	$56d^3$	$48d^2$	$40d$
7	$-49d^2$	$-42d$	-35

$35d^4 + 86d^3 + 24d^2 - 2d - 35$

4) $(h^5 + 3h^4 - h^3)(9h^3 - h^2 + 6h)$

	$9h^3$	$-h^2$	$6h$
h^5	$9h^8$	$-h^7$	$6h^6$
$3h^4$	$27h^7$	$-3h^6$	$18h^5$
$-h^3$	$-9h^6$	h^5	$-6h^4$

$9h^8 + 26h^7 - 6h^6 + 19h^5 - 6h^4$

6) $(6m^2 - 2m - 1)(m^2 + 3m + 9)$

	m^2	$3m$	9
$6m^2$	$6m^4$	$18m^3$	$54m^2$
$-2m$	$-2m^3$	$-6m^2$	$-18m$
-1	$-m^2$	$-3m$	-9

$6m^4 + 16m^3 + 47m^2 - 21m - 9$