



Multiplying Trinomials - Box Method

Name _____

Score _____

BM:18

Multiply the polynomials using box method.

1) $(7a^2 - 6a + 8)(a^3 + 2a^2 - 3a)$

	a^3	$2a^2$	$-3a$
$7a^2$			
$-6a$			
8			

3) $(n^5 + 3n^4 + 9n^3)(2n^5 - n^4 - 2n^3)$

	$2n^5$	$-n^4$	$-2n^3$
n^5			
$3n^4$			
$9n^3$			

5) $(-6v^2 + 3v - 2)(-v^2 - 6v + 10)$

	$-v^2$	$-6v$	10
$-6v^2$			
$3v$			
-2			

2) $(5x^2 - 2x + 6)(4x^2 + 6x + 3)$

	$4x^2$	$6x$	3
$5x^2$			
$-2x$			
6			

4) $(2u^3 - u^2 - u)(-u^4 + 8u^3 + u^2)$

	$-u^4$	$8u^3$	u^2
$2u^3$			
$-u^2$			
$-u$			

6) $(3p^4 + p^3 - 2p^2)(8p^5 - 2p^4 - 3p^3)$

	$8p^5$	$-2p^4$	$-3p^3$
$3p^4$			
p^3			
$-2p^2$			



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Answer key

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Multiply the polynomials using box method.

1) $(7a^2 - 6a + 8)(a^3 + 2a^2 - 3a)$

	a^3	$2a^2$	$-3a$
$7a^2$	$7a^5$	$14a^4$	$-21a^3$
$-6a$	$-6a^4$	$-12a^3$	$18a^2$
8	$8a^3$	$16a^2$	$-24a$

$$7a^5 + 8a^4 - 25a^3 + 34a^2 - 24a$$

2) $(5x^2 - 2x + 6)(4x^2 + 6x + 3)$

	$4x^2$	$6x$	3
$5x^2$	$20x^4$	$30x^3$	$15x^2$
$-2x$	$-8x^3$	$-12x^2$	$-6x$
6	$24x^2$	$36x$	18

$$20x^4 - 22x^3 + 27x^2 + 30x + 18$$

3) $(n^5 + 3n^4 + 9n^3)(2n^5 - n^4 - 2n^3)$

	$2n^5$	$-n^4$	$-2n^3$
n^5	$2n^{10}$	$-n^9$	$-2n^8$
$3n^4$	$6n^9$	$-3n^8$	$-6n^7$
$9n^3$	$18n^8$	$-9n^7$	$-18n^6$

$$2n^{10} + 5n^9 + 13n^8 - 15n^7 - 18n^6$$

4) $(2u^3 - u^2 - u)(-u^4 + 8u^3 + u^2)$

	$-u^4$	$8u^3$	u^2
$2u^3$	$-u^7$	$-16u^6$	$2u^5$
$-u^2$	u^6	$-8u^5$	$-u^4$
$-u$	u^5	$-8u^4$	$-u^3$

$$-u^7 - 15u^6 - 5u^5 - 9u^4 - u^3$$

5) $(-6v^2 + 3v - 2)(-v^2 - 6v + 10)$

	$-v^2$	$-6v$	10
$-6v^2$	$6v^4$	$36v^3$	$-60v^2$
$3v$	$-3v^3$	$-18v^2$	$30v$
-2	$2v^2$	$12v$	-20

$$6v^4 + 33v^3 - 76v^2 + 42v - 20$$

6) $(3p^4 + p^3 - 2p^2)(8p^5 - 2p^4 - 3p^3)$

	$8p^5$	$-2p^4$	$-3p^3$
$3p^4$	$24p^9$	$-6p^8$	$-9p^7$
p^3	$8p^8$	$-2p^7$	$-3p^6$
$-2p^2$	$-16p^7$	$4p^6$	$6p^5$

$$24p^9 + 2p^8 - 27p^7 + p^6 + 6p^5$$