Multiplying Polynomials - Box Method

Multiply the polynomials using box method.

1) $(5d - 4) (6d^3 + d^2 - 8d + 6) =$ _____

	$6d^3$	d^2	$-8d$	6
$5d$				
-4				

2) $(h^3 + 3h^2) (2h^4 - 3h^3 - 7h^2 + h) =$ _____

	$2h^4$	$-3h^3$	$-7h^2$	h
h^3				
$3h^2$				

3) $(y + 2) (-5y^3 + 6y^2 - 4y + 3) =$ _____

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

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Answer key

Multiply the polynomials using box method.

1) $(5d - 4)\ (6d^3 + d^2 - 8d + 6)$ = $\quad$ **$30d^4 - 19d^3 - 44d^2 + 62d - 24$**

	$6d^3$	d^2	$-8d$	6
$5d$	$30d^4$	$5d^3$	$-40d^2$	$30d$
-4	$-24d^3$	$-4d^2$	$32d$	-24

2) $(h^3 + 3h^2)\ (2h^4 - 3h^3 - 7h^2 + h)$ = $\quad$ **$2h^7 + 3h^6 - 16h^5 - 20h^4 + 3h^3$**

	$2h^4$	$-3h^3$	$-7h^2$	h
h^3	$2h^7$	$-3h^6$	$-7h^5$	h^4
$3h^2$	$6h^6$	$-9h^5$	$-21h^4$	$3h^3$

3) $(y + 2)\ (-5y^3 + 6y^2 - 4y + 3)$ = $\quad$ **$-5y^4 - 4y^3 + 8y^2 - 5y + 6$**

	$-5y^3$	$6y^2$	$-4y$	3
y	$-5y^4$	$6y^3$	$-4y^2$	$3y$
2	$-10y^3$	$12y^2$	$-8y$	6