Dividing Polynomials - Box Method

Name _____

Score _____

BM:25

Divide the polynomials using box method.

1) $\dfrac{30m^3 - 33m^2 - 58m - 16}{6m^2 - 9m - 8} =$

	$6m^2$	$-9m$	-8

2) $\dfrac{2k^3 - 19k + 3}{k - 3} =$

k			
-3			

3) $\dfrac{8x^3 - 9x^2 + 50x - 45}{8x - 9} =$

$8x$			
-9			

4) $\dfrac{3h^3 - 11h^2 + 11h + 5}{h^2 - 4h + 5} =$

	h^2	$-4h$	5

5) $\dfrac{b^3 + 2b^2 - 41b - 56}{b - 6} =$

b			
-6			

6) $\dfrac{12p^3 + 15p^2 - 40p - 50}{3p^2 - 10} =$

	$3p^2$	$0p$	-10

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Answer key

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Divide the polynomials using box method.

1) $\dfrac{30m^3 - 33m^2 - 58m - 16}{6m^2 - 9m - 8} = 5m + 2$

	$6m^2$	$-9m$	-8
$5m$	$30m^3$	$-45m^2$	$-40m$
2	$12m^2$	$-18m$	-16

2) $\dfrac{2k^3 - 19k + 3}{k - 3} = 2k^2 + 6k - 1$

	$2k^2$	$6k$	-1
k	$2k^3$	$6k^2$	$-k$
-3	$-6k^2$	$-18k$	3

3) $\dfrac{8x^3 - 9x^2 + 50x - 45}{8x - 9} = x^2 + 5$

	x^2	$0x$	5
$8x$	$8x^3$	$0x^2$	$50x$
-9	$-9x^2$	$0x$	-45

4) $\dfrac{3h^3 - 11h^2 + 11h + 5}{h^2 - 4h + 5} = 3h + 1$

	h^2	$-4h$	5
$3h$	$3h^3$	$-12h^2$	$15h$
1	h^2	$-4h$	5

5) $\dfrac{b^3 + 2b^2 - 41b - 56}{b - 6} = b^2 + 8b + 7$

	b^2	$8b$	7
b	b^3	$8b^2$	$7b$
-6	$-6b^2$	$-48b$	-56

6) $\dfrac{12p^3 + 15p^2 - 40p - 50}{3p^2 - 10} = 4p + 5$

	$3p^2$	$0p$	-10
$4p$	$12p^3$	$0p^2$	$-40p$
5	$15p^2$	$0p$	-50