

Dividing Polynomials - Box Method

Divide the following by box method.

$$1) \frac{7a^4 - 5a^3 - 10a^2 - 10a - 12}{a^2 - a - 2} =$$

a^2			
$-a$			
-2			

$$2) \frac{9d^4 + 6d^3 + 28d^2 + 9d + 20}{3d^2 + d + 4} =$$

$3d^2$			
d			

$$3) \frac{4q^4 - 12q^3 + 13q^2 - 8}{2q^2 - 5q + 3} =$$

$2q^2$		
$-5q$		
3		

$$\frac{15u - 18}{3} =$$

$$5) \frac{5n^4 + 17n^3 - 53n^2 - 3}{5n^2 - 3n - 6} =$$

$5n^2$			
$-3n$			
-6			

$$\frac{18r - 30}{3} =$$

r^2			
$4r$			
-10			

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Dividing Polynomials - Box Method

Divide the following by box method.

1) $\frac{7a^4 - 5a^3 - 10a^2 - 10a - 12}{a^2 - a - 2} = 7a^2 + 2a + 6$

	$7a^2$	$2a$	6
a^2	$7a^4$	$2a^3$	$6a^2$
$-a$	$-7a^3$	$-2a^2$	$-6a$
-2	$-14a^2$		

2) $\frac{9d^4 + 6d^3 + 28d^2 + 9d + 20}{3d^2 + d + 4} = 3d^2 + d + 5$

	$3d^2$	d	5
$3d^2$	$9d^4$	$3d^3$	$15d^2$
d	$3d^3$	d^2	$5d$
		$4d$	20

3) $\frac{4q^4 - 12q^3 + 13q^2 - 8}{2q^2 - 5q + 3}$

	$2q^2$	
$2q^2$	$4q^4$	
$-5q$	$-10q^3$	
3	$6q^2$	

$\frac{15u - 18}{u^2 - u + 2} = u^2 - u + 2$

	$-u$	2
	$-u^3$	$2u^2$
	$-3u^2$	$6u$
	$9u$	-18

5) $\frac{5n^4 + 17n^3 - 53n^2 - 3}{5n^2 - 3n - 6}$

	n^2	$4n$	-7
$5n^2$	$5n^4$	$20n^3$	$-35n^2$
$-3n$	$-3n^3$	$-12n^2$	$21n$
-6	$-6n^2$	$-24n$	42

$\frac{18r - 30}{r^2 - 4r + 3} = 3r^2 + 3r + 3$

	$3r^2$	$3r$	3
r^2	$3r^4$	$3r^3$	$3r^2$
$4r$	$12r^3$	$12r^2$	$12r$
-10	$-30r^2$	$-30r$	-30

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