



Dividing Polynomials - Box Method

Name _____

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BM:27

Divide the polynomials using box method.

1) $\frac{7z^3 - 6z^2 - 43z - 6}{7z + 1} =$

7z			
1			

2) $\frac{15a^3 + 18a^2 - 19a - 4}{3a^2 + 6a + 1} =$

	3a ²	6a	1

3) $\frac{n^3 + 3n^2 - 9n - 27}{n^2 - 9} =$

	n ²	0n	-9

4) $\frac{20v^3 - 50v^2 + 32v - 80}{4v - 10} =$

4v			
-10			

5) $\frac{4q^3 - 23q^2 - 37q + 14}{4q^2 + 5q - 2} =$

	4q ²	5q	-2

6) $\frac{2c^3 - 21c^2 - 7c + 44}{c + 11} =$

c			
11			



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Answer key

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Divide the polynomials using box method.

1) $\frac{7z^3 - 6z^2 - 43z - 6}{7z + 1} = z^2 - z - 6$

	z^2	$-z$	-6
$7z$	$7z^3$	$-7z^2$	$-42z$
1	z^2	$-z$	-6

2) $\frac{15a^3 + 18a^2 - 19a - 4}{3a^2 + 6a + 1} = 5a - 4$

	$3a^2$	$6a$	1
$5a$	$15a^3$	$30a^2$	$5a$
-4	$-12a^2$	$-24a$	-4

3) $\frac{n^3 + 3n^2 - 9n - 27}{n^2 - 9} = n + 3$

	n^2	$0n$	-9
n	n^3	$0n^2$	$-9n$
3	$3n^2$	$0n$	-27

4) $\frac{20v^3 - 50v^2 + 32v - 80}{4v - 10} = 5v^2 + 8$

	$5v^2$	$0v$	8
$4v$	$20v^3$	$0v^2$	$32v$
-10	$-50v^2$	$0v$	-80

5) $\frac{4q^3 - 23q^2 - 37q + 14}{4q^2 + 5q - 2} = q - 7$

	$4q^2$	$5q$	-2
q	$4q^3$	$5q^2$	$-2q$
-7	$-28q^2$	$-35q$	14

6) $\frac{2c^3 - 21c^2 - 7c + 44}{c + 11} = 2c^2 - c + 4$

	$2c^2$	$-c$	4
c	$2c^3$	$-c^2$	$4c$
11	$22c^2$	$-11c$	44