



# Dividing Polynomials - Box Method

Name \_\_\_\_\_

Score \_\_\_\_\_

BM:26

Divide the polynomials using box method.

1)  $\frac{5t^3 - 43t^2 + 31t - 21}{t - 7} =$

t			
-7			

3)  $\frac{42d^3 + 45d^2 - 62d + 15}{6d^2 + 9d - 5} =$

	6d <sup>2</sup>	9d	-5

5)  $\frac{27g^3 + 12g^2 + 72g + 32}{9g + 4} =$

9g			
4			

2)  $\frac{u^3 + 8u^2 - 4u - 32}{u^2 - 4} =$

	u <sup>2</sup>	0u	-4

4)  $\frac{5y^3 + 48y^2 - 27y - 70}{y + 10} =$

y			
10			

6)  $\frac{6w^3 + 8w^2 - 5w - 2}{2w^2 + 4w + 1} =$

3w			
-2			



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## Answer key

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1)  $\frac{5t^3 - 43t^2 + 31t - 21}{t - 7} = 5t^2 - 8t + 3$

	$5t^2$	$-8t$	$3$
$t$	$5t^3$	$-8t^2$	$3t$
$-7$	$-35t^2$	$28t$	$-21$

2)  $\frac{u^3 + 8u^2 - 4u - 32}{u^2 - 4} = u + 8$

	$u^2$	$0u$	$-4$
$u$	$u^3$	$0u^2$	$-4u$
$8$	$8u^2$	$0u$	$-32$

3)  $\frac{42d^3 + 45d^2 - 62d + 15}{6d^2 + 9d - 5} = 7d - 3$

	$6d^2$	$9d$	$-5$
$7d$	$42d^3$	$63d^2$	$-35d$
$-3$	$-18d^2$	$-27d$	$15$

4)  $\frac{5y^3 + 48y^2 - 27y - 70}{y + 10} = 5y^2 - 2y - 7$

	$5y^2$	$-2y$	$-7$
$y$	$5y^3$	$-2y^2$	$-7y$
$10$	$50y^2$	$-20y$	$-70$

5)  $\frac{27g^3 + 12g^2 + 72g + 32}{9g + 4} = 3g^2 + 8$

	$3g^2$	$0g$	$8$
$9g$	$27g^3$	$0g^2$	$72g$
$4$	$12g^2$	$0g$	$32$

6)  $\frac{6w^3 + 8w^2 - 5w - 2}{2w^2 + 4w + 1} = 3w - 2$

	$2w^2$	$4w$	$1$
$3w$	$6w^3$	$12w^2$	$3w$
$-2$	$-4w^2$	$-8w$	$-2$