

# DIVIDING POLYNOMIALS *Maze!*

V1

Directions: Begin at the "Start" box. Find each quotient. Use the remainder of the quotient to navigate the maze. Continue navigating through the maze until you reach the end. **STAPLE ALL WORK TO THIS PAPER!**

$(x^4 - 7x^3 - x) \div (x - 7)$    0    $(x^3 + 14x^2 + 34x - 84) \div (x + 6)$    -576    $(12x^3 + 6x^2 - 13) \div (x + 1)$   
 -7   -8   8   -19   256  
 $(5x^3 + 15x^2 + 19x + 17) \div (x + 2)$    15    $(2x^3 + 6x^2 + x + 2) \div (x + 2)$    0    $(2x^3 + 3x^2 - 9x + 44) \div (x + 4)$   
 -1   14   -4   11   36  
 $(4x^2 - 9x + 7) \div (x - 4)$    0    $(4x^3 + 11x^2 - 9x + 17) \div (x + 3)$    19   **Start!**    $(x^3 + 5x^2 - 15x + 9) \div (x - 3)$   
 5   35   -1   18   -18  
 $(x^4 - 12x^3 - 3x^2 + 36x + 5) \div (x - 12)$    -5    $(4x^3 - 21x^2 - 36x + 9) \div (x + 1)$    0    $(3x^3 + x^2 - 8x - 6) \div (x + 1)$   
 0   20   28   -44   -10  
 $(2x^3 - 21x - 42) \div (x - 4)$    4    $(5x^3 + 20x^2 - 13x + 65) \div (x + 5)$    5    $(x^4 - x^2 + 9) \div (x + 2)$   
 10   2   126   15   21  
 $(2x^3 - 27x^2 - 36x + 121) \div (x + 3)$    -68    $(3x^3 - 210x - 171) \div (x - 9)$    -18   **End! 😊**

Version 1: Leading Coefficient of Divisor = 1, Degree of Divisor = 1

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# DIVIDING POLYNOMIALS *Maze!*

V2

Directions: Begin at the "Start" box. Find each quotient. Use the remainder of the quotient to navigate the maze. Continue navigating through the maze until you reach the end. **STAPLE ALL WORK TO THIS PAPER!**

**Start!**    $(6x^3 - x^2 - 10x + 5) \div (2x + 1)$    9    $(3x^4 - 5x^3 + 11x^2 - 3x - 5) \div (3x - 2)$    -3    $(4x^3 - 31x^2 + 36x + 13) \div (4x + 1)$   
 1   0   7   24   2  
 $(x^4 - 2x^3 - 7x^2 - 5x - 10) \div (x + 2)$    -76    $(9x^3 - 36x^2 + 80x - 76) \div (3x - 5)$    30    $(3x^4 + 21x^3 - x^2 - 3x + 26) \div (x + 7)$   
 4   -1   1   -7   -2  
 $(2x^4 - 19x^2 - 50x + 4) \div (x - 4)$    -42    $(x^3 + 7x^2 - 7x - 38) \div (x + 2)$    -4    $(4x^3 - 17x^2 + 21x - 25) \div (x - 3)$   
 12   -4   -1   18   -11  
 $(8x^4 - 16x^3 - 10x^2 + 14x + 7) \div (2x + 1)$    5    $(6x^4 - 11x^3 + 11x^2 + 13x - 14) \div (6x - 5)$    -29   **End! 😊**  
 0   14   -70   1   9  
 $(2x^3 - 21x - 42) \div (x - 4)$    4    $(4x^3 - 17x^2 + 43x - 35) \div (4x - 5)$    0    $(8x^4 - 4x^2 - x + 9) \div (2x + 1)$   
 -22   2   -20   -14   0  
 $(20x^4 + x^3 + 16x^2 - 2x - 1) \div (4x - 3)$    -1    $(2x^4 - 55x - 17) \div (x - 3)$    -32    $(3x^4 - 4x^3 - 3x^2 + 16x - 16) \div (3x - 4)$

Version 2: Leading Coefficient of Divisor  $\geq 1$ , Degree of Divisor = 1

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# DIVIDING POLYNOMIALS *Maze!*

V3

Directions: Begin at the "Start" box. Find each quotient. Use the remainder of the quotient to navigate the maze. Continue navigating through the maze until you reach the end. **STAPLE ALL WORK TO THIS PAPER!**

$(4x^3 - 49x^2 + 75x - 32) \div (4x - 5)$    -14    $(3x^3 - 14x^2 + 36x - 49) \div (3x - 5)$    -48    $(15x^3 - 62x^2 + 74x - 24) \div (3x - 4)$   
 -7   -12   84   0   1  
 $(18x^3 - 9x^2 - 38x - 6) \div (6x + 1)$    10    $(35x^3 - 10x^2 - 14x + 14) \div (7x - 2)$    8    $(22x^4 + 45x^3 - 25x^2 + 8x + 21) \div (2x + 5)$   
 0   18   -1   -26   -4  
 $(8x^3 - 48x^2 + 68x - 67) \div (2x - 9)$    9   **Start!**    $(6x^3 - 11x^2 + 6x - 6) \div (2x - 1)$    -5    $(21x^3 - 38x^2 + 43x - 22) \div (3x - 2)$   
 4   -4   -11   -40   4  
 $(6x^3 - 29x^2 + 32x - 14) \div (2x - 7)$    116    $(12x^3 - 7x^2 - 12x + 56) \div (3x + 5)$    1    $(3x^3 - 11x^2 - 10x + 6) \div (3x + 1)$   
 0   3   0   9   8  
**End! 😊**   -48    $(15x^4 - 20x^3 - 42x^2 + 74x - 24) \div (3x - 4)$    -120    $(2x^4 - 5x^3 - 2x^2 + 29x - 60) \div (2x - 5)$   
 -16   -38   -28   0   -5  
 $(7x^4 - 11x^3 + 60x^2 - 60x) \div (7x - 4)$    -2    $(5x^4 + 8x^3 - 14x^2 + 49x - 20) \div (5x - 2)$    2    $(12x^3 - 16x^2 + 35x + 29) \div (3x + 2)$

Version 3: Leading Coefficient of Divisor  $> 1$ , Degree of Divisor = 1

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# DIVIDING POLYNOMIALS *Maze!*

V4

Directions: Begin at the "Start" box. Find each quotient. Use the remainder of the quotient to navigate the maze. Continue navigating through the maze until you reach the end. **STAPLE ALL WORK TO THIS PAPER!**

$(x^4 - 10x^3 + 6x^2 - 10x - 14) \div (x^2 + 1)$    -9    $(36x^4 - 75x^3 - 51x^2 + 91x - 7) \div (3x^2 - 9x + 5)$    4    $(3x^5 + 15x^4 - 12x^3 - x^2 - 5x + 6) \div (3x^3 - 1)$   
 -10   -19   0   -20   13  
 $(12x^4 - x^3 - 8x^2 - 9) \div (3x^2 - x - 1)$    -12    $(4x^6 - 3x^5 - 4x^4 + 4x^3 - x + 2) \div (x^3 - x)$    -21    $(15x^5 + 59x^4 + 51x^3 - 8x^2 + 16) \div (3x^2 + 7x - 1)$   
 27   -5   -28   2   -8  
 $(12x^3 - 2x^2 - 58x - 13) \div (x^2 - x - 4)$    0   **End! 😊**   -18    $(2x^5 - 9x^3 - 42x^2 - 35x - 105) \div (2x^2 + 5)$   
 10   -7   9   0   32  
 $(x^7 + 2x^6 - 3x^5 - x^4 + x^3 + 10) \div (x^3 - x^2)$    -20    $(x^4 + 4x^3 - 11x^2 - 26x - 3) \div (x^2 + 6x + 4)$    17    $(2x^5 - 13x^3 + 18x^2 + 21x - 46) \div (2x^2 - 7)$   
 -21   -4   14   23   -10  
 $(3x^4 - 4x^3 + 29x^2 - 36x - 3) \div (x^2 + 9)$    15    $(15x^5 + 37x^3 - 30x^2 - 8x + 17) \div (5x^2 - 1)$    0    $(x^4 + 2x^3 - 67x^2 + 28x) \div (x^2 - 7x)$   
 -5   -6   11   -3   7  
 $(3x^4 - 2x^3 - 18x^2 - 33x^2 + 66x - 5) \div (3x^2 - 11)$    -12    $(x^6 - x^5 + x^4 - x^3 - 15x^2 + 15x - 6) \div (x^2 - x)$    2   **Start!**    $(x^5 - 2x^4 + x^3 + x^2 + 10) \div (x^2 + 1)$

Version 4: Leading Coefficient of Divisor  $\geq 1$ , Degree of Divisor  $> 1$

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