

Get better at Math.  
Get better at  
everything.



Come experience the Cuemath methodology and ensure your child stays ahead at math this summer.



**Adaptive  
Platform**



**Interactive Visual  
Simulations**



**Personalized  
Attention**

For Grades 1 - 10




LIVE online classes  
by trained and  
certified experts.

Get the Cuemath advantage

**Book a FREE trial class**

# SYNTHETIC DIVISION WORKSHEETS

Use synthetic division for the problems from 1-7 and write the answer of the form  $\text{Quotient} + \frac{\text{Remainder}}{\text{Divisor}}$ .



1)  $(2x^4 - 5x^3 + 11x^2 - 3x - 5) \div (x - 1)$

2)  $(x^5 - 1) \div (x - 1)$

3)  $(3x^3 + 2x^2 + x + 1) \div (x + 3)$

4)  $(2x^2 - x + 1) \div (2x + 1)$

5)  $(3x^3 - 5x^2 + 4x + 2) \div (3x + 1)$

6)  $(-x^5 + 3x^3 + 1) \div (x - 2)$

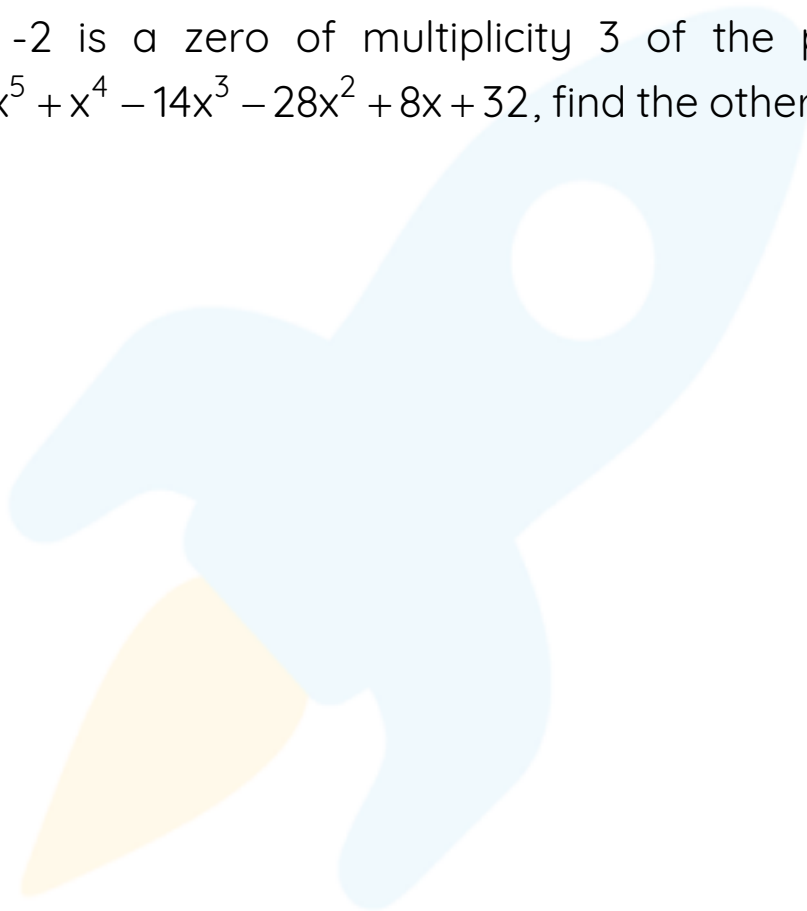
7)  $x^5 \div (x + 2)$

8) If 2 and -5 are the roots of the equation  $2x^3 + 7x^2 - 17x - 10 = 0$ , then find the third root.

9) The area of a rectangular brick wall is given by the expression  $(x^4 - 5x^3 - 2x^2 + 13x - 15)$  square units. Its length is  $(x - 5)$  units. Find its width.



- 10) If  $-2$  is a zero of multiplicity 3 of the polynomial  $p(x) = x^5 + x^4 - 14x^3 - 28x^2 + 8x + 32$ , find the other two zeros.



**When you learn math  
in an interesting way,  
you never forget.**



**25 Million**

Math classes &  
counting

**100K+**

Students learning  
Math the right way

**20+ Countries**

Present across USA, UK,  
Singapore, India, UAE & more.

## Why choose Cuemath?

"Cuemath is a valuable addition to our family. We love solving puzzle cards. My daughter is now visualizing maths and solving problems effectively!"

- Gary Schwartz

"Cuemath is great because my son has a one-on-one interaction with the teacher. The instructor has developed his confidence and I can see progress in his work. One-on-one interaction is perfect and a great bonus."

- Kirk Riley

"I appreciate the effort that miss Nitya puts in to help my daughter understand the best methods and to explain why she got a problem incorrect. She is extremely patient and generous with Miranda."

- Barbara Cabrera

Get the Cuemath advantage

**Book a FREE trial class**

**ANSWERS**

1)	$2x^3 - 3x^2 + 8x + 5$
2)	$x^4 + x^3 + x^2 + x + 1$
3)	$3x^2 - 7x + 22 - \frac{65}{x+3}$
4)	$x - 1 + \frac{2}{2x+1}$
5)	$x^2 - 2x + 2$
6)	$-x^4 - 2x^3 - x^2 - 2x - 4 - \frac{7}{x-2}$
7)	$x^4 - 2x^3 + 4x^2 - 8x + 16 - \frac{32}{x+2}$
8)	$-\frac{1}{2}$
9)	$(x^3 - 2x + 3)$ units
10)	1 and 4

## FUN FACT

1. If  $x = a$  is a zero of a polynomial, then  $(x - a)$  is its corresponding factor.
2. If the degree of a polynomial is  $n$ , then it has  $n$  linear factors (not all need to be different).
3. The last element of the synthetic division is used to determine the quotient and the remainder of the division.

