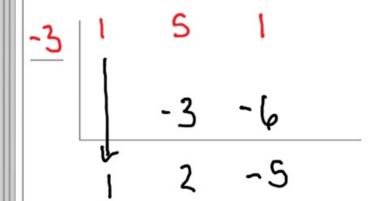
Synthetic Division Practice

Directions: Divide the polynomials using synthetic division. Make sure that the polynomial is in descending order (standard form). If one of the terms is missing, you must put a placeholder of 0 in its place.

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



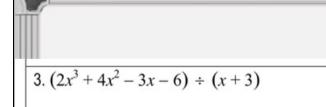
No, there is a remainder

2.
$$(2x^3 - 11x^2 + 9x - 20) \div (x - 5)$$

5	2	-11	٩	-20
		Įσ	-5	20
	Ψ 2	- 1	4	0

$$2) 2 \times^{2} - x + 4$$

Is (x-5) a factor of the polynomial? Why or why not? YES, the remainder is zero Untitled 370.pdf Page 2 of 5



3)
$$2x^2-2x+3-\frac{15}{x+3}$$

Is (x + 3) a factor of the polynomial? Why or why not?

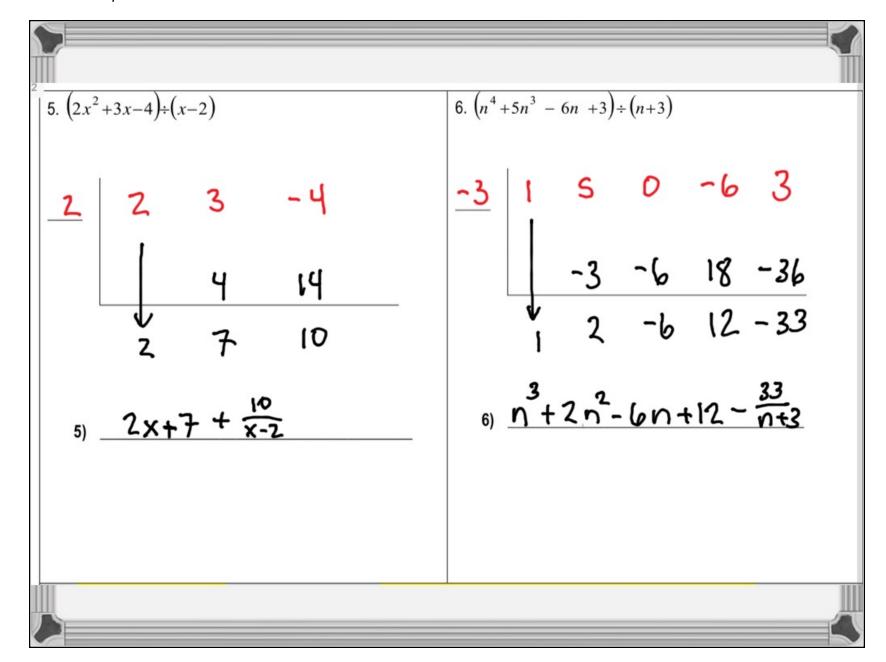
No, there is a remainder

4.
$$(2x^3-11x^2+13x-44)\div(x-5)$$

4)
$$2x^2 - x + 8 - \frac{4}{x-5}$$

Is (x - 5) a factor of the polynomial? Why or why not?

No, there is a remainder



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Use **SYNTHETIC DIVISION** to divide the following. DON'T FORGET TO PUT PLACEHOLDERS IN FOR #7-8.

7.
$$(x^3-125) \div (x-5)$$

8.
$$(5x^4 + 2x^2 - 15x + 10) \div (x+2)$$

$$\frac{5x^3-10x^2+22x-59+\frac{128}{x+2}}{128}$$

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