Use direct substitution to evaluate $f(x) = 2x^4 - 5x^3 - 8x + 3$ when $x = 4$.

Evaluate when $x=4$: $2x^4-5x^3-8x+3$

$2(4)^4-5(4)^3-8(4)+3$

$2(256)-5(64)-8(4)+3$

$512-320-32+3$

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Synthetic Substitution:

$2x^4-5x^3-8x+3 \longrightarrow 2x^4-5x^3+0x^2-8x+3$

4	2	-5	0	-8	3
	↓	8	12	48	160
	2	3	12	40	163

Evaluate if x = 3

$f(x) = 5x^3 + 3x^2 - 2x + 7$

3	5	3	-2	7
	↓	15	54	156
	5	18	52	163

Evaluate:

$2x^2+3x-5x^4+7$ when $x=1$

$-5x^4+0x^3+2x^2+3x+7$

1	-5	0	2	3	7
	↓	-5	-5	-3	0
	-5	-5	-3	0	7