Factoring Sum and Differences of Two Cubes  $(Ax^3 + B \text{ or } Ax^3 - B)$ 

We're Bruyn Math



Shari Bruyn & Associates

Putting the Fun in the Fundamentals of Math

## Polynomials - Factoring Sum and Differences of Two Cubes 1

Cover up the incorrect factoring by shading in the rectangle. You will reveal a fun pun.

THEY	THE	TOLD	BOSS
8׳-125 =	׳+216 =	׳-125 =	27׳-64 =
$(2x-5)(4x^2+10x+25)$	$(x+6)(x^2-12x+36)$	$(x-5)(x^2+5x+25)$	$(3x-4)(9x^2+12x-16)$
ME	I	THINKS	HAD
8x³+343 =	64׳-125 =	64x³-27 =	27׳-1 =
$(2x+7)(4x^2-14x+49)$	$(4x-5)(16x^2+20x+25)$	$(8x-3)(64x^2+24x+9)$	$(3x-1)(9x^2+3x+1)$
SAY	TYPE	VAMPIRE	Α
343׳-8 =	216׳+1 =	8׳+125 =	׳+64 =
$(7x-2)(49x^2+14x-8)$	$(6x+1)(36x^2-6x+1)$	$(2x+5)(4x^2+10x-25)$	$(x+4)(x^2-4x+16)$
BECAUSE	THE	BLOOD	WAS
125׳-1 =	216x³-343 =	343׳+1 =	125x³-27 =
$(5x-1)(25x^2-5x+1)$	$(6x-7)(12x^2+42x+14)$	$(6x+1)(36x^2-6x+1)$	$(5x+3)(25x^2-15x+9)$
BUT	DRINK	IT	WAS
27x³-8 =	49x³+36 =	׳+216 =	8x³-125 =
$(3x-2)(9x^2+6x+4)$	$(7x+6)(49x^2-42x+36)$	$(x+6)(x^2-6x+36)$	$(2x-5)(4x^2+10x+25)$
Α	TYPE	MILK	0
125׳+27 =	343x³-8 =	64x³+125 =	64׳-343 =
$(5x+3)(25x^2-15x+9)$	$(7x-2)(49x^2+14x+8)$	$(4x+5)(16x^2+20x+25)$	$(4x-7)(16x^2+28x+49)$

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THEY	THE	TOLD	BOSS
8x³-125 =	x³+216 =	׳-125 =	27׳-64 =
$(2x-5)(4x^2+10x+25)$	$(x+6)(x^2-12x+36)$	$(x-5)(x^2+5x+25)$	$(3x-4)(9x^2+12x-16)$
ME	I	THINKS	HAD
8x³+343 =	64x³-125 =	64x³-27 =	27׳-1 =
$(2x+7)(4x^2-14x+49)$	$(4x-5)(16x^2+20x+25)$	$(8x-3)(64x^2+24x+9)$	$(3x-1)(9x^2+3x+1)$
SAY	TYPE	VAMPIRE	A
343x³-8 =	216x³+1 =	8׳+125 =	x³+64 =
$(7x-2)(49x^2+14x-8)$	$(6x+1)(36x^2-6x+1)$	$(2x+5)(4x^2+10x-25)$	$(x+4)(x^2-4x+16)$
BECAUSE	THE	BLOOD	WA5
125׳-1 =	216׳-343 =	343x³+1 =	125׳-27 =
$(5x-1)(25x^2-5x+1)$	$(6x-7)(12x^2+42x+14)$	$(6x+1)(36x^2-6x+1)$	$(5x+3)(25x^2-15x+9)$
BUT	DRINK	IT	WAS
27x³-8 =	49x³+36 =	x³+216 =	8׳-125 =
$(3x-2)(9x^2+6x+4)$	$(7x+6)(49x^2-42x+36)$	$(x+6)(x^2-6x+36)$	$(2x-5)(4x^2+10x+25)$
A	TYPE	MILK	0
125x³+27 =	343x³-8 =	64x³+125 =	64x³-343 =
$(5x+3)(25x^2-15x+9)$	$(7x-2)(49x^2+14x+8)$	$(4x+5)(16x^2+20x+25)$	$(4x-7)(16x^2+28x+49)$

They told me I had type A blood, but it was a type-O