

November 14, 2017

① Difference of Two Squares

$$a^2 - b^2 = (a+b)(a-b)$$

$$\boxed{4x^2} - \boxed{9y^2} = (2x+3y)(2x-3y)$$

$\frac{a^2}{a^2} \quad \frac{b^2}{b^2}$   
 $a' = 2x \quad b' = 3y$

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② Sum of Two Cubes

Sum:  $a^3 + b^3 = (a+b)(a^2 - ab + b^2)$

$$\boxed{125x^3} + \boxed{27y^3} = (5x+3y)(25x^2 - 15xy + 9y^2)$$

$\frac{a^3}{a^3} \quad \frac{b^3}{b^3}$   
 $a' = 5x \quad b' = 3y$

~~$125x^3 - 75x^2y + 45xy^2 + 75x^2y - 45xy^2 + 27y^3$~~

ck

$$\boxed{x^3} + \boxed{1} = (x+1)(x^2 - x + 1)$$

$\frac{a^3}{a^3} \quad \frac{b^3}{b^3}$   
 $a' = x \quad b' = 1$

not factorable

Nov 14-10:25 AM

③ Difference:  $a^3 - b^3 = (a-b)(a^2 + ab + b^2)$

$$x^3 - 1 = (x-1)(x^2 + x + 1)$$

$a' = x \quad b' = 1$

$$\boxed{64} - \boxed{216x^3} = (4-6x)(16 + 24x + 36x^2)$$

$\frac{a^3}{a^3} \quad \frac{b^3}{b^3}$   
 $a' = 4 \quad b' = 6x$

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Do 6.5 & 6.6

\* Review class notes on Sum & Diff of Two Cubes

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