Special Binomials

Difference of Squares : $(a^2 - b^2) = (a+b)(a-b)$

1	49
4	64
9	81
16	100
25	121
36	144

Ex 1 $25x^2 - 64$

- Need to be thinking what squared is 25 ?
- what squared is 64 ?

$(5x+8)(5x-8)$

Ex 2 $4x^2 - 9y^2$

$(2x+3y)(2x-3y)$

Ex 3 $36x^6 - 49y^2$

$(6x^3 + 7y)(6x^3 - 7y)$

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

Ex 1 $27x^3 - 64$

- What cubed is $27x^3$?
- What cubed is 64 ?

$(3x - 4)$ FIRST! What is a ? $3x$ What is b ? $+4$

Finish the problem now.

$(3x-4)(9x^2 + 12x + 16)$

Ex 2 $(8y^3 + 27)$

$(2y + 3)$ What is a? $2y$
What is b? 3

Finish problem.

$(2y+3)(4y^2 - 6y + 9)$

Ex 3 $(5x^4 + 40x)$

Can we factor out anything first? A Common Monomial?

Yes! $5x(x^3 + 8)$

Now we have a sum of cubes.

$5x(x+2)$ What is a? x
What is b? 2

$5x(x+2)(x^2 - 2x + 4)$

Assignment: ~~Trinomial WS~~

pg 433 # 10-15
26-31