Factor the following:

$2(3x \cdot 5) = 30x$

$2(6x) = 12x$

Perfect Squares

$\underbrace{x^2}_{x} - 12x + \underbrace{36}_{6}$

$(x-6)^2$

$\underbrace{9x^2}_{3x} + 30x + \underbrace{25}_{5}$

$(3x+5)^2$

Difference of Squares

$x^2 - 121 = (x-11)(x+11)$

Sum of Squares

$4x^2 + 16$

$(2x - 4i)(2x + 4i)$

$4x^2 + \cancel{8ix} - \cancel{8ix} - 16i^2$

$4x^2 - 16(-1)$

$\boxed{4x^2 + 16}$

1) $16n^2 - 9$

$(4n+3)(4n-3)$

2) $4m^2 - 25$

$(2m+5)(2m-5)$

3) $16b^2 - 40b + 25$

$(4b-5)^2$

4) $4x^2 - 4x + 1$

$(2x-1)^2$

5) $9x^2 - 1$

$(3x+1)(3x-1)$

6) $n^2 - 25$

$(n+5)(n-5)$

7) $x^2 + 4$

$(x+2i)(x-2i)$

8) $9x^2 + 16$

$(3x+4i)(3x-4i)$

9) $16x^2 + 24x + 9$

$(4x+3)^2$

10) $25x^2 + 60x + 36$

$(5x+6)^2$

11) $36x^2 + 100$

$(6x+10i)(6x-10i)$

12) $81x^2 + 49$

$(9x+7i)(9x-7i)$

Factoring Practice

Quiz on Factoring Quadratics