

**Factoring Polynomials**  
Emphasis on Factoring Difference of Squares

Completely factor each of the following:

1.  $x^2 - 36$

$$(x+6)(x-6)$$

2.  $x^2 - 100$

$$(x-10)(x+10)$$

3.  $x^2 - 169$

$$(x-13)(x+13)$$

4.  $x^2 - 400$

$$(x+20)(x-20)$$

5.  $x^2 - 81$

$$(x+9)(x-9)$$

6.  $x^2 - 25$

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

7.  $x^2 - 121$

$$(x-11)(x+11)$$

8.  $x^2 - 361$

$$(x+19)(x-19)$$

9.  $x^2 - 4$

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

10.  $x^2 - 1$

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

11.  $289x^2 - 9$

$$(17x - 3)(17x + 3)$$

12.  $4x^2 - 25$

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

13.  $144x^2 - 49$

$$(12x - 7)(12x + 7)$$

14.  $64x^2 - 225$

$$(8x + 15)(8x - 15)$$

15.  $324x^2 - 361$

$$(18x - 19)(18x + 19)$$

16.  $400x^2 - 81$

$$(20x - 9)(20x + 9)$$

17.  $169x^2 - 1$

$$(13x - 1)(13x + 1)$$

18.  $256x^2 - 361$

$$(16x - 19)(16x + 19)$$

19.  $25x^2 - 196$

$$(5x + 14)(5x - 14)$$

20.  $81x^2 - 400$

$$(9x - 20)(9x + 20)$$