



# Factoring

## Factoring the Difference of Two Squares

$$a^2 - 36 = (a + 6)(a - 6)$$
$$3x^2 - 48 = 3(x^2 - 16) = 3(x + 4)(x - 4)$$

Factor, write prime if prime.

1.  $x^2 - 1$

12.  $-x^2 + 16$

2.  $x^2 - 9$

13.  $36m^2 - 121$

3.  $x^2 + 4$

14.  $2x^2 - 8$

4.  $x^2 - 25$

15.  $25 + 4x^2$

5.  $9y^2 - 16$

16.  $4a^2 - 81b^2$

6.  $4x^2 - 25$

17.  $12x^2 - 75$

7.  $9x^2 - 1$

18.  $a^2b - b^3$

8.  $a^2 - x^2$

19.  $-98 + 2x^2$

9.  $25 - m^2$

20.  $5x^2 - 45y^2$

10.  $x^2 - 16y^2$

21.  $9x^4 - 4$

11.  $25m^2 - n^2$

22.  $16x^4 - y^2$