

Quadratic Equations Worksheet
Algebra 2B

Name: _____
Date: _____

Factor the following:

1. $2x^2 + 2x^2 + x^2 + x$

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

2. $10x^2 + 5x$

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

3. $x^2 + 10x^2 + 25x^2$

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

4. $6x^2 + 25x + 4$

$$(3x + 1)(2x - 5)$$

Determine whether the given binomial is a factor of the polynomial. If complete using synthetic division.

5. $x + 5$ is a factor of $2x^2 + 15x + 1$

NO

6. $x + 5$ is a factor of $x^2 + 10x^2 + 25x + 1$

Yes

7. $x + 5$ is a factor of $2x^2 + 15x + 1$

NO

8. $x + 5$ is a factor of $x^2 + 10x^2 + 25x + 1$

Yes