Algebra 2 - 6.5 & 6.6 Worksheet

Name: _____

Date: _____   Hour: _____

Solve each polynomial equation by factoring. State the multiplicity of each root.

1. $9x^3 - 3x^2 - 3x + 1 = 0$

2. $x^5 - 2x^4 - 24x^3 = 0$

_____   _____

Identify all the real roots of each equation.

3. $x^3 + 10x^2 + 17x = 28$

4. $3x^3 + 10x^2 - 27x = 10$

_____   _____

Write the simplest polynomial function with the given roots.

5. 1, 4 and -3

6. $2i$, $\sqrt{3}$, and 4

_____   _____

Solve each equation by finding all roots.

7. $x^4 - 2x^3 - 14x^2 - 2x - 15 = 0$

8. $x^3 + 3x2 + 9x + 27 = 0$

_____   _____