

Algebra II
Polynomial 5.5

Name _____

Find all roots and all linear factors. Use the clues given.

1. $x^3 + 4x^2 + x - 6 = 0$

No calculator, $x = -2$ is a root.

2. $x^4 + 4x^3 + 7x^2 + 16x + 12 = 0$

No calculator, $(x + 1)$ is a factor

3. $x^5 + 3x^3 - 4x = 0$

No calculator

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

No calculator, $(-1, 0)$ is an x-intercept

5. $x^4 + 3x^3 - 3x^2 - 15x - 10 = 0$

Use your calculator

6. $2x^4 - x^3 - 19x^2 + 9x + 9 = 0$

No calculator, $(1, 0)$ is an x-intercept

7. $2x^3 + x^2 - 7x - 6 = 0$

No calculator, $(x - 2)$ is a factor

8. $15x^3 - 32x^2 + 3x + 2 = 0$

Use your calculator