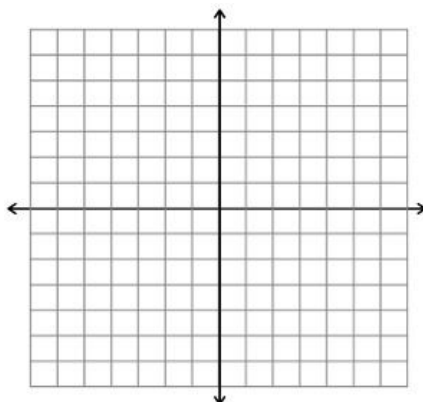


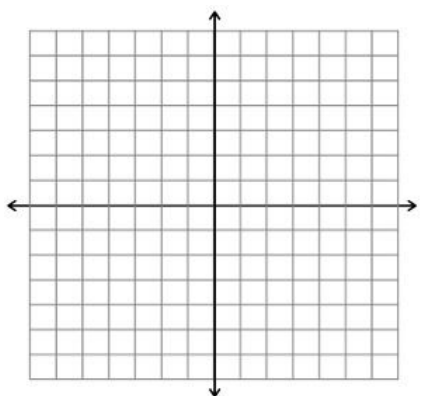
Math 1050 A3.4	Name
1- 4 Find all the rational zeros of the polynomial, and write in factored form.	
1. $P(x) = 2x^4 - x^3 - 19x^2 + 9x + 9$	2. $P(x) = 3x^4 - 10x^3 - 9x^2 + 40x - 12$
Factored Form: $P(x) = (x \quad)(x \quad)(x \quad)(x \quad)$	Factored Form: $P(x) = (x \quad)(x \quad)(x \quad)(x \quad)$
3. $P(x) = 4x^3 + 8x^2 - 11x - 15$	4. $P(x) = 4x^3 - 7x + 3$
Factored Form: $P(x) = (x \quad)(x \quad)(x \quad)(x \quad)$	Factored Form: $P(x) = (x \quad)(x \quad)(x \quad)(x \quad)$
5-7 Find all the real zeros of the polynomial. Use the Quadratic Formula if necessary.	
5. $P(x) = x^3 + 4x^2 + 3x - 2$	6. $P(x) = x^4 - 6x^3 + 4x^2 + 15x + 4$
7. $P(x) = 4x^3 - 6x^2 + 1$	8. Divide: $\begin{array}{r} 6x^3+2x^2+22x \\ 2x^2+5 \end{array}$

9-12 A polynomial is given. a) Find all the real zeros of P. b) Sketch a LABELED graph of P.

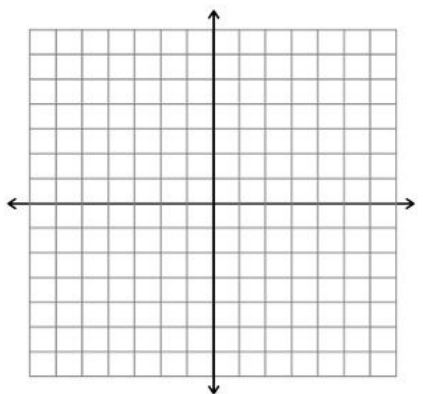
9. $P(x) = -x^3 - 2x^2 + 5x + 6$



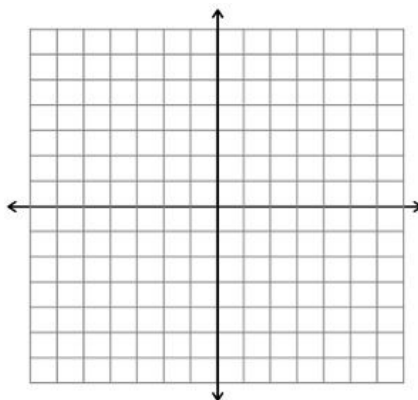
10. $P(x) = 2x^3 - 7x^2 + 4x + 4$



11. $P(x) = x^4 - 5x^3 + 6x^2 + 4x - 8$

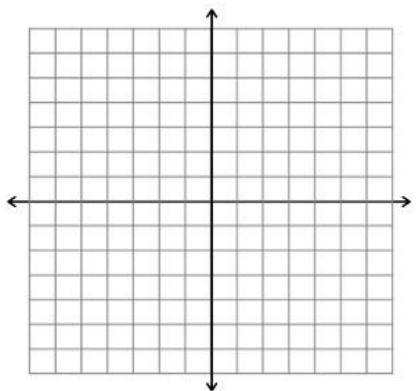


12. $P(x) = -x^4 + 10x^2 + 8x - 8$

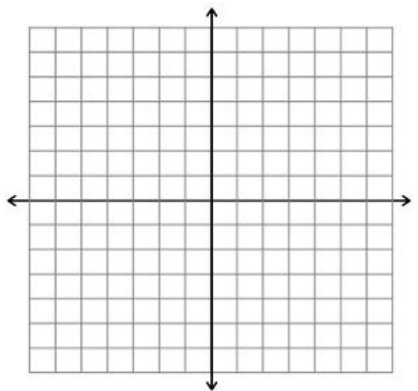


Sketch a LABELED graph of P , using the remainder theorem, factoring, synthetic division, Quadratic Formula, etc.

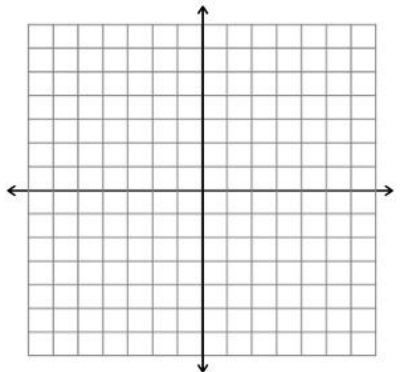
13. $P(x) = 2x^3 - 3x^2 - 2x + 3$



14. $P(x) = -x^3 + 4x^2 + 6x - 24$



15. $P(x) = 4x^4 + 15x^2 - 4$



16. . Find the following for the Quadratic, then sketch the graph:

$$f(x) = 5x^2 - 30x + 25$$

Vertex:

Vertex (Standard) Form:

x-Intercepts:

y-Intercept:

