6-2 Tangent Lines And Critical Points

Name _____

Give the equation of the line tangent to the given graph at the given point. Put the equation in slope-intercept form.

_____ 1. $f(x) = x^3 + 4x^2 - 10$ at (2, 14)

_____ 2. $f(x) = 2x^3 + 4x - 10$ at (1, -4)

_____ 3. $f(x) = x^3 + x^2$ at (2, 12)

_____ 4. $f(x) = x^5 + 4x^2 - 10x$ at (1, -5)

_____ 5. $f(x) = 4x^3 + 4x^2 - 4x$ at (-1, 4)

_____ 6. $f(x) = x^{10} + x^2 - x$ at (1, 1)

_____ 7. $f(x) = 2x^3 + 3x^2 - 4x$ at (1, 1)

From the given information, determine if the center point is a maximum, minimum, or point of inflection.

_____ 8.	f(5.9) = 9	f(6) = 9.3	f(6.1) = 8.9
_____ 9.	f(2.9) = 8.9	f(3) = 9.3	f(3.1) = 8.88
_____ 10.	f(.9) = -8.45	f(1) = -8.2	f(1.1) = -8.47
_____ 11.	f(3.9) = 9.9	f(4) = 9.83	f(4.1) = 9.81
_____ 12.	f(-7.1) = -8.7	f(-7) = -8.87	f(-6.9) = -8.73
_____ 13.	f(.9) = -8.7	f(1) = -8.78	f(1.1) = -8.83