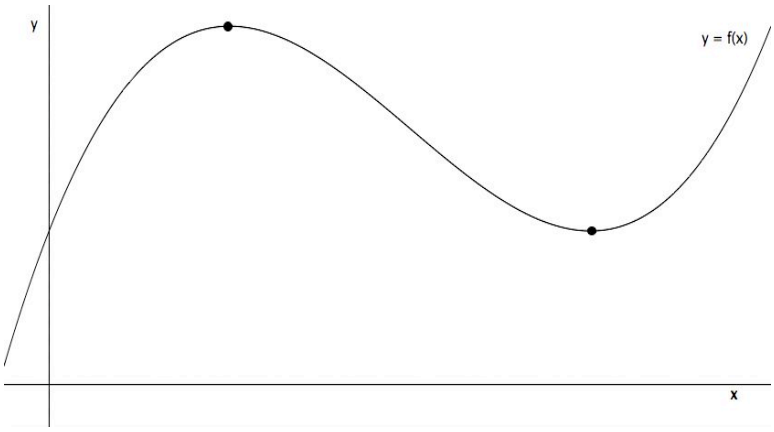
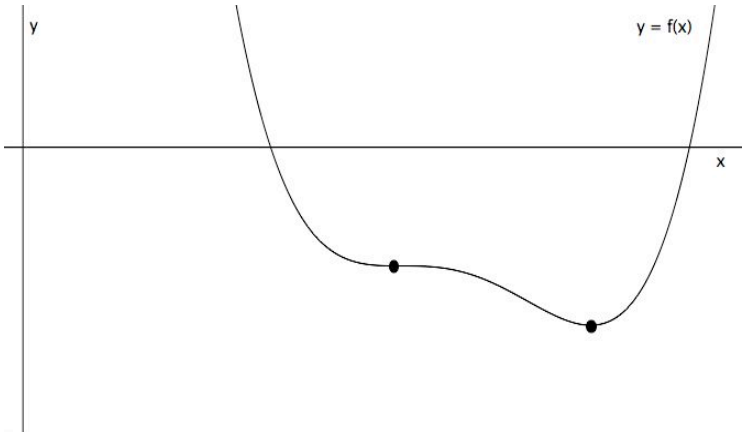
Calculus I: Derivative as Slope

1) What is the slope of the graph at each of the four points marked on the two graphs below?

2) Given that the derivative of the function *f* graphed below is $f'(x) = x^2 - 4x + 3$, use algebra to find the *x*-coordinates of the two points marked on the graph.



3) Given that the derivative of the function *f* graphed below is $f'(x) = x^3 - 7x^2 + 16x - 12$, use algebra to find the *x*-coordinates of the two points marked on the graph. Hint: $x^3 - 7x^2 + 16x - 12 = (x-2)(x^2 - 5x + 6)$.



4) Label each of the four points marked above with one of the following four terms. Use each term once.

Local minimum point	Local maximum point
Global minimum point	Neither minimum nor maximum point

5) True or False? If $f'(a) = 0$, then the graph of *f* has a local (or global) minimum point or maximum point with *x*-coordinate $x = a$.