(1.) (1 pt each) True / False--Circle your choice. Circle **T** only if the statement is ***always*** true. [No explanation necessary.]

(a) If $f'(x) = g'(x)$ for all x, then $f(x) = g(x)$ for all x. **T** **F**

(b) If $f''(a) = 0$, then f has an inflection point at $x = a$. **T** **F**

(c) If $x = p$ is not a critical point of f, then $x = p$ is not a local maximum of f. **T** **F**

(d) If $\int_0^2 f(x)dx = 6$ then $\int_0^4 f(x)dx = 12$. **T** **F**

(e) If $\int_0^2 f(x)dx = 6$ and $h(x) = 5f(x)$ then $\int_0^2 h(t)dt = 30$. **T** **F**

(2.) (4 pts.) Is the function $g(x) = x^3 - \frac{x}{16}$ invertible? _____

Below, give a clear justification for your answer.

(3.) (3 pts.) [No need to simplify, but show ***all*** of your work. **Circle** your answer.]
Find the derivative of $s(x) = \sin^5(3x^2 - 2)$.