

Quiz 7 — MA16010 — October 18, 2017

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Let $f(x) = 3x^3 - 4x + 1$. Please answer the following problems in complete sentences.

1. Find $f'(x)$ and $f''(x)$.
2. Find any intervals where $f(x)$ is concave up and any intervals where $f(x)$ is concave down.
3. Give the coordinates of the inflection point.
4. Find any intervals where $f(x)$ is increasing and any intervals where $f(x)$ is decreasing.
5. On what interval is $f(x)$ concave up and decreasing?