c. [4 points] Recall that R gives the radius of the surface of the water, in inches, t minutes after the water started being poured into the vase. Suppose that R is given by $R = m(t)$ and $m'(3) = 0.7$. Use these facts to complete the following sentence:

After the water has been poured into the vase for three minutes, over the next ten seconds, the radius of the surface of the water ...

7. [7 points] Let A and B be positive constants and $f(x) = \dfrac{A(x^2 - B)}{\sqrt{x-3}}$, for $x > 3$. Note that

$$f'(x) = \frac{A(3x^2 - 12x + B)}{2(x-3)^{\frac{3}{2}}} \qquad \text{and} \qquad f''(x) = \frac{3A(x^2 - 8x + 24 - B)}{4(x-3)^{\frac{5}{2}}}.$$

Find all values of A and B so that $f(x)$ has an inflection point at $(8, 2)$. Use calculus to justify that the point $(8, 2)$ is an inflection point. If there are no such values, write NONE.

$A =$ _____ $B =$ _____