MAT-1033
Take home assignment

Name: _______________________

This assignment is due on Apr. 16 at the beginning of the class period. Work must be shown on THIS sheet. Late work or work on a different sheet will not be accepted. Please circle your answers. SHOW ALL WORK, NO WORK NO CREDIT.

1. Simplify completely \( \sqrt[ ]{\frac{72a^5b^{20}c^{31}}{a^2z}} \) (hint: don’t forget to rationalize denominator) (5pts)

2. Simplify completely: \( 2 \sqrt[3]{54w^5} - 7w \sqrt[3]{16w^2} \) (5pts)
3. Rationalize denominator: \[
\frac{5\sqrt{6} + 2\sqrt{2}}{\sqrt{6} - \sqrt{2}}.
\] (5 pts)

4. Solve for \(x\) by completing the square: \[
x^2 + 4x - 1 = 0
\] (points will not be awarded if a different method is used) (5 pts)