Section: **Name:**

Algebra And Number - AN3 - In Class Assignment

You Will Have The First **20 Minutes** Of Class To Complete This Assignment:

1. **Prove That** $(a^m)(a^n) = a^{m+n}$ **:**

2. **Prove That** $a^m \div a^n = a^{m-n}$ **:**

3. **Prove That** $(a^m)^n = a^{mn}$ **:**

4. **Prove That** $(ab)^m = a^m b^m$ **:**

5. **Prove That** $\left(\frac{a}{b}\right)^n = \left(\frac{a^n}{b^n}\right)$**,** $b \neq 0$ **:**

6. **Using Exponent Laws, Prove That:** $a^0 = 1$**,** $a \neq 0$

7. **Using Exponent Laws, Prove That:** $a^{-n} = \frac{1}{a^n}$**,** $a \neq 0$