

Name: _____

Directions: Show all work. No credit for answers without work.

1. [
- 2 parts, 2 points each**
-] Simplify the following expressions if possible.

(a) $(x^2 \cdot x^5)^3$

(b) $\sqrt{x^2 + y^2}$

2. [
- 2 points**
-] For which real numbers
- b
- does
- $x^2 + bx + 5 = 0$
- have a single solution?

3. [
- 2 parts, 2 points each**
-] Solve the following indefinite integrals.

(a) $\int (x + 1)(x + 2) dx$

(b) $\int x e^{x^2} dx$