Worksheet 0: Common Algebra Errors

This worksheet is intended to help with your ability to correct common algebra errors! Although, I will record your score, I will **not** include your score in your class average. Instead, your score on this worksheet will help me (and you) determine if you need to seek tutoring from the *Math-Business Tutoring Center* located in *Room 001 LARTS* (basement floor).

For each case, present a *clear justification* as to why the expressions on each side of the equals sign are *unequal*.

a) (2 pt) $\sqrt{x^2 + 9} \neq x + 3$, **Why?**

b) (2 pt) $\dfrac{x^2 + 1}{x} \neq x + 1$, **Why?**

c) (2 pt) $\dfrac{n}{n + 1} \neq 1 + n$, **Why?**

d) (2 pt) $1 - \dfrac{x - 1}{2} \neq \dfrac{1 - x}{2}$, **Why?**

e) (2 pt) $-x^2 \neq (-x)^2$, **Why?**

f) (2 pt) $x^2 = 1 \not\Rightarrow x = 1$, **Why?**

g) (2 pt) $(4x-1)^2 \neq 16x^2 + 1$, **Why?**

h) (2 pt) $3 \cdot k^4 \neq (3k)^4$, **Why?**

i) (2 pt) $n^2 \geq 4 \not\Rightarrow n \geq 2$, **Why?**

j) (2 pt) $x > 0 \not\Rightarrow x^2 > x$, **Why?**

k) (2 pt) $\sqrt{x^2} \not\Rightarrow x$, **Why?**

l) (2 pt) $\dfrac{0}{10} \neq undefined$, **Why?**