Algorithm Analysis Problems 2

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1. Determine the growth function and order of the following code fragment:

for (int count = 0; count < n; count ++) {

for (int count2 = 0; count2 < n; count2 = count2 + 2) {

System.out.println(count, count2);

}

}

**GROWTH FUNCTION:** y = x - (½) → **ORDER:** n (Linear)

This is because it adds 2 every time, making linear growth. Also the y intercept is -(½)

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1. Determine the growth function and order of the following code fragment:

for (int count = 0; count < n; count ++) {

for (int count2 = 0; count2 < n; count2 = count2 \* 2) {

System.out.println(count, count2);

}

}

**GROWTH FUNCTION:** y = 0 → **ORDER:** l (Constant)

This is because every time it multiplies 0 by 0, making no growth.

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