

COT 3100 Quiz #2: $d = rt$, logs (Week of Mar 20, 2023) – M, T, W Version

Last Name: _____ **First Name:** _____

Circle Rec: M8am M4:30pm T10:30am W8am R10:30am R4:30pm F11:30am

1) (8 pts) How many zeroes does $200!$ end in, when represented in base 24? (Note: Be careful, consider both 2 and 3...)

2) (7 pts) Stan starts with a mixture of acid and water which is a total of X ounces. When he adds 2 ounces of acid to the mixture, it becomes a solution that is 50% acid. If an additional 5 ounces of water is added to this 50% acid mixture, the result is a solution that is $33\frac{1}{3}\%$ acid. What is the value of X ?

3) (10 pts) Let r and s be roots of the quadratic equation $x^2 - 4x + 10 = 0$. What is the quadratic equation with leading coefficient one which has the roots r^2s and rs^2 ?