T4.m123sp25.gif0.. ###.Firstname.Lastname.T4 \_\_\_\_\_\_ M123 T4 (c) sp25, A. Azzolino 00. This is an open book, open notes, calculator & internet use permitted test, BUT, no humans and

no artificial intelligence are permitted. By my initials, I swear no one has helped me, I have not used artificial intelligence, & I have helped no one with this test.

000.My email address is : \_\_\_\_\_

0000. Print the test. Write work/answers on the test. Produce a digital copy. Rename it using ###.First.Last.T4 etc. Attach it to email & send to yellow@mathnstuff.com or green@mathnstuff.com. 00000. Write your ###.First.Last.T4.p\_\_\_ on each page OR NOT CREDIT FOR PAGE!!

Test is not due until noon on Sunday, 4/13/2025.

1. If 60% of all students have part-time jobs in addition to going to school full time, find the

probability that in a sample of 20 students.

\_\_\_\_ 1a. exactly 15 have part-time jobs

\_\_\_\_\_ 1b. at least 10 have part-time jobs

\_\_\_\_ 1c. at most 5 do not have part-time jobs.

2. A history class has 75 members. If there is a 12% absentee rate per class meeting, find

\_\_\_\_\_ 2a. the mean,

\_\_\_\_\_ 2b. the variance,

2c. the standard deviation of the number of student who will be absent from each class.

Hint: A student either attends the class or does not attend the class.

3. Using a standard normal distribution, compute the indicated probability

3a. p ( z < -1.77) 3b. p ( z > 2.1) 3c. p (-.5 < z < 2.77)

4. Using the shaded normal distribution determine the z-score. that corresponds to this shading.



5. Given a normal distribution with a mean of 10 and standard deviation of 2, and a score of 11.5. compute:

 5a. the corresponding z-score
 5b. p (x < 12.5)
 5c. p (5 < x < 12.5)
 5d. determine "a" such that p (x < a ) = $.6400$

6. In YOUR words, answer, "What's a sampling distribution?"