CONCORDIA COLLEGE
MOORHEAD, MINNESOTA

Name: _____

Date: _____

Section: ○ Mon/Wed ○ Tue/Thu

1. **(6 Points)**

An airport shuttle's waiting time is uniformly distributed between 0 and 20 minutes.

A. What is the probability that a passenger waits between 5 and 15 minutes? Show your calculation.

- Answer: _____

B. According to this continuous probability model, what is the probability that a passenger waits exactly 10 minutes? Explain.

- Answer: _____

2. **(4 Points)**

Flight times on a route are normally distributed with a mean of 110 minutes and a standard deviation of 10 minutes. For a standard normal random variable Z, you may use $P(Z \leq 1) = 0.8413$.

A. Calculate the z-score corresponding to a flight time of 120 minutes. Show your calculation.

- Answer: _____

B. What is the probability that a flight takes more than 120 minutes? Show your calculation.

- Answer: _____

Score: _____ / 10