MATH 102, Spring 2023 **Name:** _____
In class work 14 **Row and Seat:** _____

"Sometimes it's a little better to travel than to arrive." ROBERT M. PIRSIG

In class work 14 has questions 1 through 3 with a total of 8 points. This assignment is due at the end of the class period (9:55 AM). This assignment is printed on **both** sides of the paper.

1. The human population P of Long Pine, Nebraska is an exponential function of the years T after the year 2000. Specifically, the population in the years 2000 and 2010 are given in the table

Year	T	P
2000	0	341
2010	10	305

Figure 1: Human population of Long Pine, Nebraska for the years 2000 and 2010.

2 (a) Find the exponential function that matches the given data.

2 (b) Using your exponential function from part 'a,' when will the population of Long Pine be 280?

2 2. Find the solution to the linear equations

$$5x + 8y = 14,$$
$$2x - 2y = 3.$$

2 3. Find the solution to the linear equations

$$x + y + z = 14,$$
$$y - z = 10,$$
$$2z = 8.$$