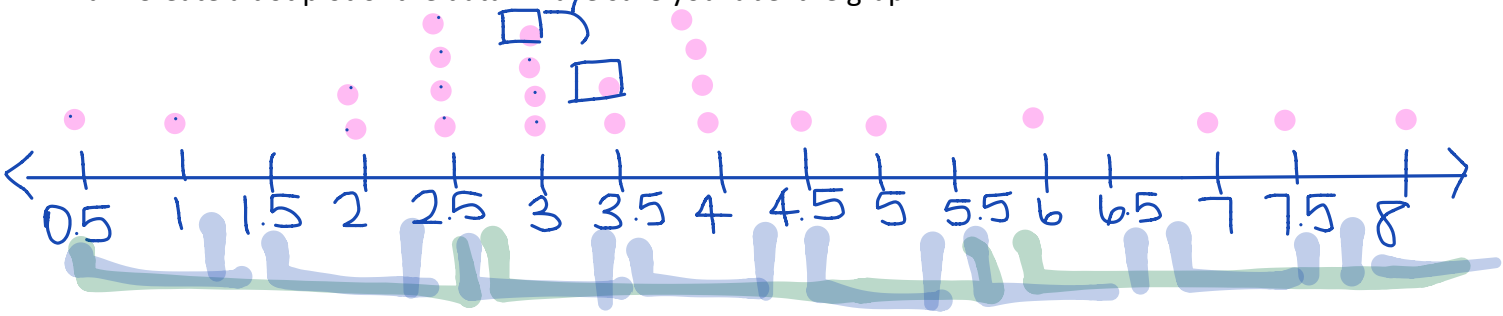
Name: _____ Date: _____

Tamiko works after school at her father's convenience store. The hours she worked some days after school and on weekends in February are shown.

2.0	2.5	3.0	4.0	2.0	2.5	3.5	4.0	3.0	2.5	3.0	4.0
1.0	0.5	2.5	3.0	5.0	7.0	4.5	6.0	3.5	4.0	8.0	7.5

24 values.

a. Create a dot plot of the data. Make sure you label the graph.



b. Calculate the following:

Mean: $\frac{88.5}{24} = 3.7$ hrs Median: $\frac{3+3.5}{2} = 3.25$ hrs Mode: 2.5, 3, 4 hrs.

Maximum: 8 hrs Minimum: 0.5 hrs. Range: {0.5, 8}

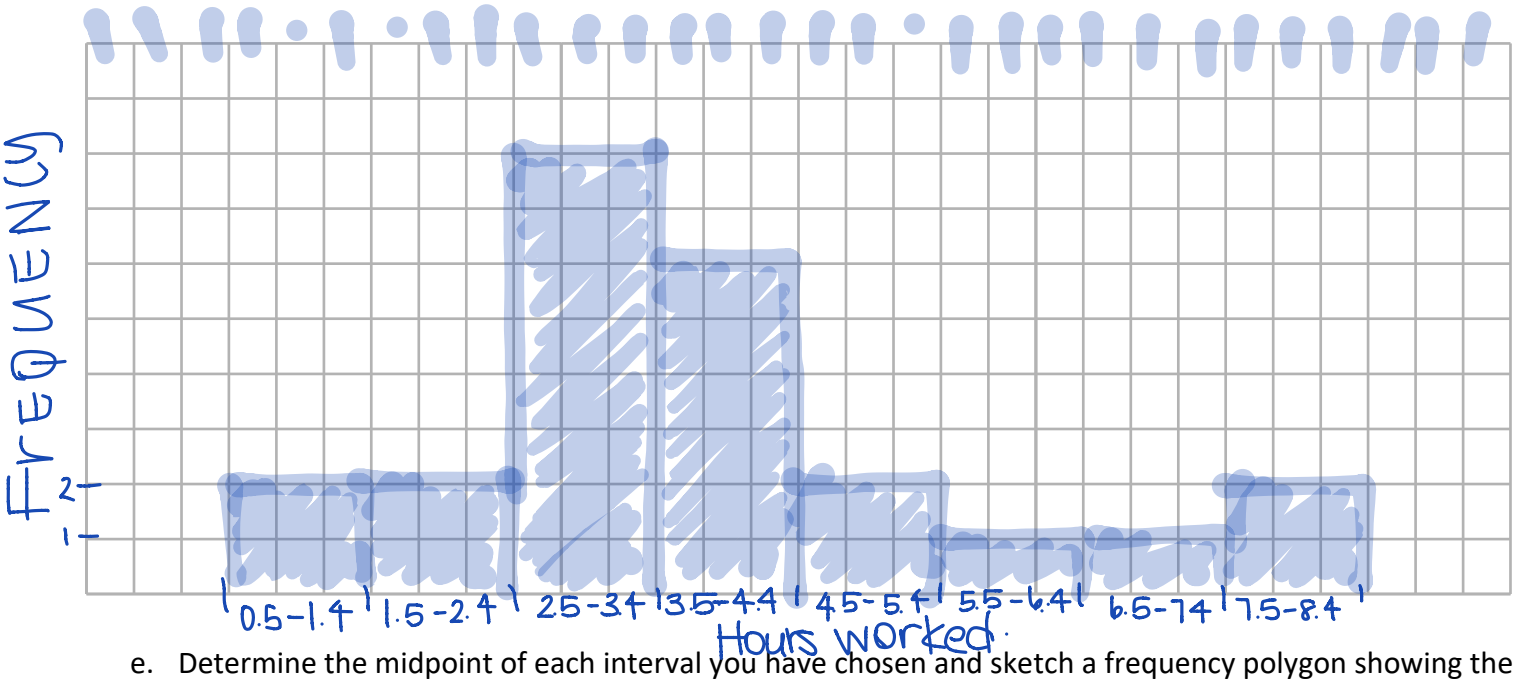
c. Create a Frequency table. **Justify** your choice of interval width.

- Each bin is 2hrs wide – then we only have 3 bins (loosing information)
- Each bin is 1hr wide – then we have 8 bins

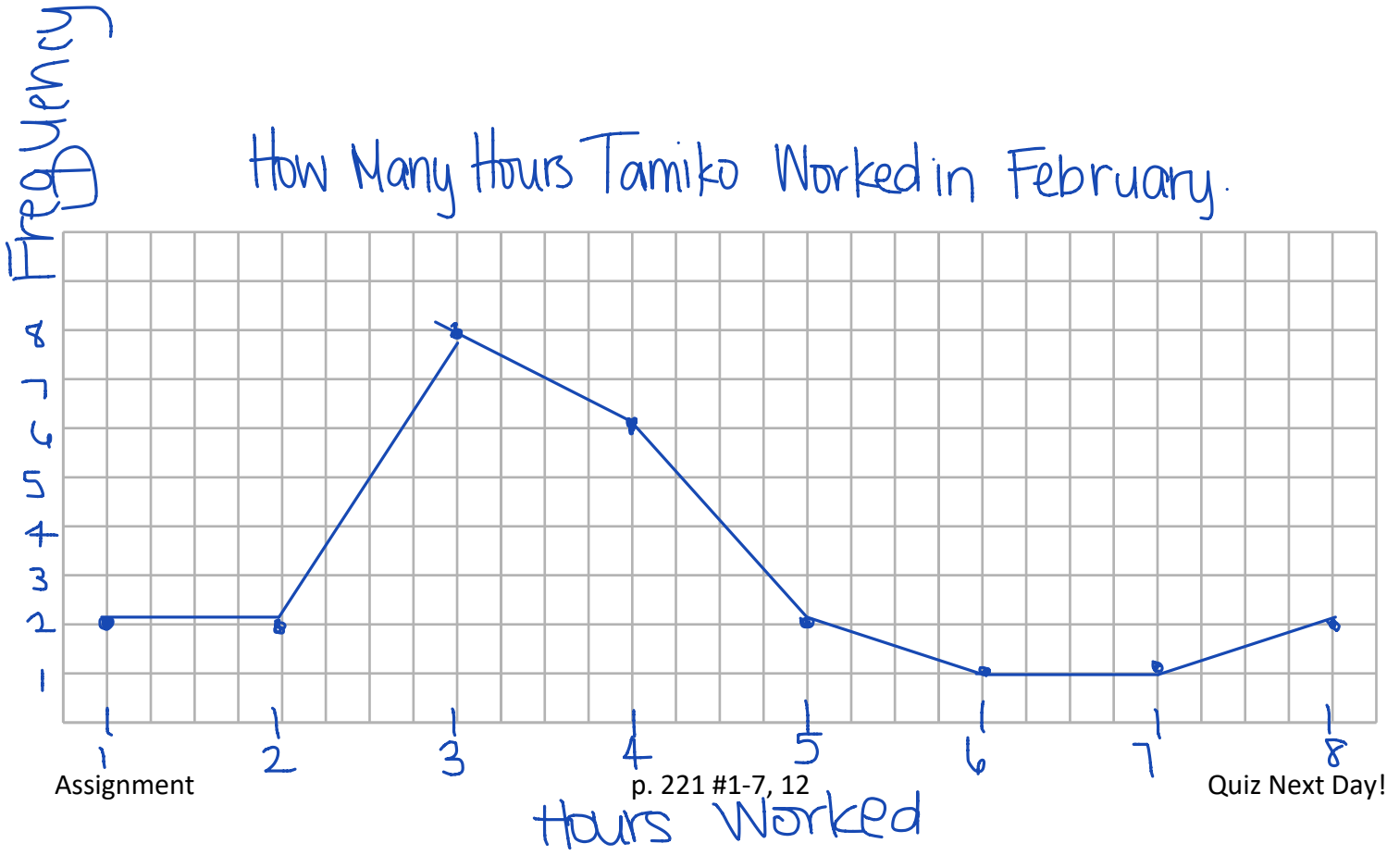
Hours	0.5-1.4	1.5-2.4	2.5-3.4	3.5-4.4	4.5-54	55-64	6.5-7.4	7.5-8.4
Tally	||	||	𝍸 |||	𝍸 |	||	|	|	||
Frequency	2	2	8	6	2	1	1	2

d. Sketch a histogram of this data. Ensure you label your axes appropriately. You may do this using your calculator and then sketch the histogram below.

Grid 30×10
24×8



e. Determine the midpoint of each interval you have chosen and sketch a frequency polygon showing the distribution of the time Tamiko worked. Please label your axes and title your graph.



f. What conclusions can you easily draw from each of the graphs you have created? What are the advantages of each type of graph?

Dot Plot (line graph)	Histogram	Frequency Polygon
-single axis - dots to represent data points. PROS - fast to draw - no calculations - easy to read CONS - doesn't work well for large spread out data (no binning) (no vertical axis)	- both axes (vertical is always frequency) - use rectangles to represent data. PRO - very easy to read - very pretty. - lots of software will create them for you. CON - take longer to draw - easy to make them look bad.	- both axes - mid-point of each 'bin' is represented by a dot. PRO - very clean - +ve slope /-ve slope show inc/dec. - easy to draw CONS - hard to read with larger data sets - one more calculation