

## Federal Minimum Wage

1. Go to the FRED economic data website to get precise values for the Federal Minimum Wage Graph (<https://bit.ly/3I9ZDxf>).

\*If the graph does not load, search FRED for Federal Minimum Wage.

2. Using Desmos, construct a graph to represent Federal Minimum Wage from the same time frame that your group investigated in Lesson 1. Use a table in Desmos to create this graph.
3. Find the slope from your first point to your last point in the time frame for your group. Do you think this slope is a good representative of the entire time frame? Why or why not?
4. Construct the line of best fit by following these steps:
  - In Desmos, create a new line under your  $xy$ -chart.
  - Type in  $y_1 = mx_1 + b$ .
5. What is the equation of the line of best fit?
6. What is the slope? Interpret what the slope represents. Is this the same slope you found in #3? Is it similar?
7. Does your graph have linear association? If not, choose a segment that has linear association and repeat.
8. Does your graph have outliers? If so, which point(s)?
9. Does your line of best fit have positive or negative correlation? What does this mean in the context of your graph?

**10.** Now, compare the slope you found for minimum wage in Question 6 and the slopes you found for cost of living in Questions 5b and 5c in Worksheet 1.

- a.** What does each slope represent?
- b.** Which slope is steeper?
- c.** Which slope would you prefer to be steeper? Why?
- d.** Does it make sense to compare these values? Why or why not?
- e.** Go back to the AIER Cost of Living Calculator (<https://bit.ly/3I9ZDxf>) and compare minimum wage in 1968 to how much that is worth in 2020. Do you think the minimum wage in 2020 is fair? Why or why not?
- f.** Now use the AIER Cost of Living Calculator to compare the minimum wage for the year at the beginning of your line segment to how much it is worth in the year at the end of your line segment. What do you observe?
- g.** Extension: Were the TikTok's numbers correct?