Understanding LIHEAP Performance Measures
Hands-On Exercises
INSTRUCTIONS

Working with the LIHEAP Performance Management Website (PMW) Performance Measures Tab

Step #1 – Navigate to the LIHEAP PMW: https://liheappm.acf.hhs.gov/

Step #2 – Log-in to the site using the account information provided.

Step #3 – Select the "Performance Measures" tab in the main menu bar at the top of the page.

Step #4 – Click the bolded "here" under the "Performance Management Integration Guide" section.

Step #5 – Under the "State Performance Measures Executive Summary", select the state indicated in the exercise and open their Executive Summary.

Step #6 – Under "State Performance Measures Snapshot", select the state indicated in the exercise and open their Snapshot.

Note: It might be helpful to open both the Executive Summary and State Snapshot in two different windows, as you will be using both during this exercise.

Understanding LIHEAP Performance Measures
Hands-On Exercises
QUESTION SHEET

Example #1 – Wisconsin

Please open Wisconsin's Executive Summary and State Snapshot, using the instructions above.

1. Does Wisconsin furnish higher benefits to higher burden households? *[Hint: Look at the first question in the gray box in the top-left of the Executive Summary]*

    - Circle Yes or No in the Answer Sheet.

    Yes.

2. The benefit for high burden households in Wisconsin is $_____ higher / lower. *[Hint: Look at the first question in the gray box in the top-left of the Executive Summary]*

    - Record the dollar amount in the Answer Sheet.
    - Circle Higher or Lower to correctly complete the sentence in the Answer Sheet.

    The benefit for high burden households in Wisconsin is $183 **higher.**

3. Does Wisconsin pay a larger share of the home energy bill for high burden households? [*Hint: Look at the second question in the gray box in the top-left of the Executive Summary]*

    - Circle Yes or No in the Answer Sheet.

    Yes.

4. Does Wisconsin prevent service loss more times than it restores service when clients face bill payment issues? *[Hint: Look at the figures and text in the bottom half of the Executive Summary]*

    - Circle Yes or No in the Answer Sheet.

    Yes.

5. Wisconsin restored service _____ more / less times than it prevented service loss when clients faced energy equipment issues? *[Hint: Look at the figures and text in the bottom half of the Executive Summary]*

    - Record the number of occurrences in the Answer Sheet.
    - Circle More or Less to correctly complete the sentence in the Answer Sheet.

    Wisconsin prevented service loss 21,353 **more** times than it restored service when clients faced bill payment issues.

    CALCULATION STEPS:

1. Wisconsin prevented service loss 24,067 times as a result of bill payment assistance, which is more than the 2,714 times it restored service due to bill payment assistance.
2. Calculate the difference of the times Wisconsin prevented service loss due to bill payment assistance and the number of times it restored service due to bill payment assistance: 24,067 – 2,714 = 21,353.

6. Does Wisconsin restore service more times than it prevents service loss when clients face energy equipment issues? *[Hint: Look at the figures and text in the bottom half of the Executive Summary]*

    - Circle Yes or No in the Answer Sheet.

    No.

7. Wisconsin restored service _____ more / less times than it prevented service loss when clients faced energy equipment issues? *[Hint: Look at the figures and text in the bottom half of the Executive Summary]*

    - Record the number of occurrences in the Answer Sheet.
    - Circle More or Less to correctly complete the sentence in the Answer Sheet.

    Wisconsin restored service 116 **less** times than it prevented service loss when clients faced energy equipment issues.

    CALCULATION STEPS:

    1. Wisconsin restored service 172 times as a result of equipment repair and replacement, which is less than the 288 times it prevented service loss due to equipment repair and replacement.
    2. Calculate the difference of the times Wisconsin prevented service loss due to equipment repair and replacement and the number of times it restored service due to equipment repair and replacement: 288 – 172 = 116.

8. What are the annual incomes of average households and high burden households in Wisconsin? *[Hint: Look at Figure 1-1 in the State Snapshot]*

    - Record the dollar amount of the annual income for average households and high burden households in the Answer Sheet.

    The annual income for an average household is $18,099 and the annual income for high burden households is $9,596.

9. The annual income of high burden households is _____ % more / less than average households? *[Hint: Look at Figure 1-1 in the State Snapshot]*

    - Record the percentage in the Answer Sheet.
    - Circle More or Less to correctly complete the sentence in the Answer Sheet.

The annual income of high burden households is 47% **less** than average households.

CALCULATION STEPS:

1. High burden average income is $9,596, which is less than the average income of $18,099 for all households.
2. To calculate the percent less, first calculate the difference in average income between high burden households and all households: $18,099 – $9,596 = $8,503.
3. Next, divide the difference of $8,503 by the average income for all households to estimate the percent decrease: $8,503 / $18,099 = 0.469, which represents a percentage of about 47%.

10. What are the annual energy expenditures of average households and high burden households in Wisconsin? *[Hint: Look at Figure 1-2 in the State Snapshot]*

    - Record the dollar amount of the annual energy expenditures for average households and high burden households in the Answer Sheet.

The annual energy expenditures of average households are $1,773 and the annual energy expenditures for high burden households are $2,246.

11. The annual energy expenditures of high burden households is _____ % more / less than average households? *[Hint: Look at Figure 1-2 in the State Snapshot]*

    - Record the percentage in the Answer Sheet.
    - Circle More or Less to correctly complete the sentence in the Answer Sheet.

The annual energy expenditures of high burden households are 27% **more** than average households.

CALCULATION STEPS:

1. High burden average annual energy expenditure is $2,246, which is more than the average energy expenditure of $1,773 for all households.
2. To calculate the percent more, first calculate the difference in average energy expenditures between high burden households and all households: $2,246 – $1,773 = $473.
3. Next, divide the difference of $473 by the average energy expenditure for all households to estimate the percent increase: $473 / $1,773 = 0.2668, which represents a percentage of about 27%.

12. Before LIHEAP, the energy burden of high burden households is _____% of average households? *[Hint: Look at Figure 1-3 in the State Snapshot]*

    - Record the percentage in the Answer Sheet.

The energy burden of high burden households is 239% of average households.

CALCULATION STEPS:

1. Divide the energy burden of 23.4% for high burden households by the energy burden of 9.8% for average households: 23.4% / 9.8 = 2.3877, which represents a percentage of about 239%.

13. The average benefit for high burden households is _____% of average households? *[Hint: Look at Figure 1-4 in the State Snapshot]*

    - Record the percentage in the Answer Sheet.

The average benefit of high burden households is 145% of average households.

CALCULATION STEPS:

1. Divide the average benefit of $590 for high burden households by the average benefit of $407 for average households: $590 / $407 = 1.4496, which represents a percentage of about 145%.

14. After LIHEAP, the energy burden of high burden households is _____% of average households? *[Hint: Look at Figure 1-5 in the State Snapshot]*

    - Record the percentage in the Answer Sheet.

The energy burden of high burden households is 231% of average households.

CALCULATION STEPS:

1. Divide the energy burden of 17.3% for high burden households by the energy burden of 7.5% for average households: 17.3% / 7.5% = 2.3067, which represents a percentage of about 231%.

15. After completing Questions #12 – 14, what are your thoughts about those comparisons?

    - Write a sentence or two in the Answer Sheet.

16. For which fuel types does LIHEAP furnish higher benefits to high burden households compared to average households? *[Hint: Look at Figure 2-4 in the State Snapshot]*

    - Circle all fuel types for which high burden households receive a higher benefit in the Answer Sheet.

Electric, Natural Gas, Fuel Oil, and Propane

17. For which fuel types does LIHEAP pay a higher share of the energy bill for high burden households compared to average households? *[Hint: Look at Figure 2-6 in the State Snapshot]*

- Circle all fuel types for which LIHEAP pays a higher share of the energy bill for high burden households in the Answer Sheet.

Electric, Natural Gas, Fuel Oil, and Propane

18. For which fuel types does LIHEAP furnish more preventions than restorations due to bill payment issues? *[Hint: Look at Figure 5-1 in the State Snapshot]*

    - Circle all fuel types for which LIHEAP furnishes more preventions than restorations in the Answer Sheet.

    Electric, Natural Gas, Fuel Oil, Propane, and Other Fuels

19. For which fuel types does LIHEAP furnish more preventions than restorations due to energy equipment issues? *[Hint: Look at Figure 5-2 in the State Snapshot]*

    - Circle all fuel types for which LIHEAP furnishes more preventions than restorations in the Answer Sheet.

    Natural Gas and Other Fuels

20. Based on the investigation above, do you think that Wisconsin needs to examine some aspect of their program related to targeting benefits? If so, what?

    - Write a sentence or two in the Answer Sheet.

21. Based on the investigation above, do you think that Wisconsin needs to examine some aspect of their program related to preventions and restorations? If so, what?

    - Write a sentence or two in the Answer Sheet.

Understanding LIHEAP Performance Measures
Hands-On Exercises
QUESTION SHEET

Example #2 – Minnesota

Please open Minnesota's Executive Summary and State Snapshot, using the instructions in the beginning of this document.

1. Does Minnesota furnish higher benefits to higher burden households? *[Hint: Look at the first question in the gray box in the top-left of the Executive Summary]*

    - Circle Yes or No in the Answer Sheet.

    Yes.

2. The benefit for high burden households in Minnesota is $_____ higher / lower. *[Hint: Look at the first question in the gray box in the top-left of the Executive Summary]*

    - Record the dollar amount in the Answer Sheet.
    - Circle Higher or Lower to correctly complete the sentence in the Answer Sheet.

    The benefit for high burden households in Minnesota is $296 **higher**.

3. Does Minnesota pay a larger share of the home energy bill for high burden households? *[Hint: Look at the second question in the gray box in the top-left of the Executive Summary]*

    - Circle Yes or No in the Answer Sheet.

    Yes.

4. Does Minnesota prevent service loss more times than it restores service when clients face bill payment issues? *[Hint: Look at the figures and text in the bottom half of the Executive Summary]*

    - Circle Yes or No in the Answer Sheet.

    Yes.

5. Minnesota prevented service loss _____ more / less times than it restored service when clients faced bill payment issues? *[Hint: Look at the figures and text in the bottom half of the Executive Summary]*

    - Record the number of occurrences in the Answer Sheet.
    - Circle More or Less to correctly complete the sentence in the Answer Sheet.

    Minnesota prevented service loss 41,820 **more** times than it restored service when clients faced bill payment issues.

    CALCULATION STEPS:

1. Minnesota prevented service loss 49,429 times as a result of bill payment assistance, which is more than the 7,609 times it restored service due to bill payment assistance.
2. Calculate the difference of the times Minnesota prevented service loss due to bill payment assistance and the number of times it restored service due to bill payment assistance: 49,429 – 7,609 = 41,280.

6. Does Minnesota restore service more times than it prevents service loss when clients face energy equipment issues? *[Hint: Look at the figures and text in the bottom half of the Executive Summary]*

    - Circle Yes or No in the Answer Sheet.

    Yes.

7. Minnesota restored service _____ more / less times than it prevented service loss when clients faced energy equipment issues? *[Hint: Look at the figures and text in the bottom half of the Executive Summary]*

    - Record the number of occurrences in the Answer Sheet.
    - Circle More or Less to correctly complete the sentence in the Answer Sheet.

    Minnesota restored service 6,155 **more** times than it prevented service loss when clients faced energy equipment issues.

    CALCULATION STEPS:

    1. Minnesota restored service 6,115 times as a result of equipment repair and replacement, which is more than the 0 times it prevented service loss due to equipment repair and replacement.
    2. Calculate the difference of the times Minnesota prevented service loss due to equipment repair and replacement and the number of times it restored service due to equipment repair and replacement: 6,115 – 0 = 6,115.

8. What are the annual incomes of average households and high burden households in Minnesota? *[Hint: Look at Figure 1-1 in the State Snapshot]*

    - Record the dollar amount of the annual income for average households and high burden households in the Answer Sheet.

    The annual income for an average household is $18,626 and the annual income for high burden households is $7,959.

9. The annual income of high burden households is _____ % more / less than average households? *[Hint: Look at Figure 1-1 in the State Snapshot]*

    - Record the percentage in the Answer Sheet.
    - Circle More or Less to correctly complete the sentence in the Answer Sheet.

The annual income of high burden households is 57% **less** than average households.

CALCULATION STEPS:

1. High burden average income is $7,959, which is less than the average income of $18,626 for all households.
2. To calculate the percent less, first calculate the difference in average income between high burden households and all households: $18,626 – $7,959 = $10,667.
3. Next, divide the difference of $10,667 by the average income for all households to estimate the percent decrease: $10,667 / $18,626 = 0.572, which represents a percentage of about 57%.

10. What are the annual energy expenditures of average households and high burden households in Minnesota? *[Hint: Look at Figure 1-2 in the State Snapshot]*

    - Record the dollar amount of the annual energy expenditures for average households and high burden households in the Answer Sheet.

The annual energy expenditures of average households are $2,102 and the annual energy expenditures for high burden households are $2,600.

11. The annual energy expenditures of high burden households is _____ % more / less than average households? *[Hint: Look at Figure 1-2 in the State Snapshot]*

    - Record the percentage in the Answer Sheet.
    - Circle More or Less to correctly complete the sentence in the Answer Sheet.

The annual energy expenditures of high burden households are 24% **more** than average households.

CALCULATION STEPS:

1. High burden average annual energy expenditure is $2,600, which is more than the average energy expenditure of $2,102 for all households.
2. To calculate the percent more, first calculate the difference in average energy expenditures between high burden households and all households: $2,600 – $2,102 = $498.
3. Next, divide the difference of $498 by the average energy expenditure for all households to estimate the percent increase: $498 / $2,102 = 0.2369, which represents a percentage of about 24%.

12. Before LIHEAP, the energy burden of high burden households is _____% of average households? *[Hint: Look at Figure 1-3 in the State Snapshot]*

    - Record the percentage in the Answer Sheet.

The energy burden of high burden households is 289% of average households.

CALCULATION STEPS:

1. Divide the energy burden of 32.7% for high burden households by the energy burden of 11.3% for average households: 32.7% / 11.3% = 2.893, which represents a percentage of about 289%.

13. The average benefit for high burden households is _____% of average households? *[Hint: Look at Figure 1-4 in the State Snapshot]*

    - Record the percentage in the Answer Sheet.

The average benefit of high burden households is 143% of average households.

CALCULATION STEPS:

1. Divide the average benefit of $992 for high burden households by the average benefit of $696 for average households: $992 / $696 = 1.425, which represents a percentage of about 143%.

14. After LIHEAP, the energy burden of high burden households is _____% of average households? *[Hint: Look at Figure 1-5 in the State Snapshot]*

    - Record the percentage in the Answer Sheet.

The energy burden of high burden households is 266% of average households.

CALCULATION STEPS:

1. Divide the energy burden of 20.2% for high burden households by the energy burden of 7.6% for average households: 20.2% / 7.6% = 2.658, which represents a percentage of about 266%.

15. After completing Questions #12 – 14, what are your thoughts about those comparisons?

    - Write a sentence or two in the Answer Sheet.

16. For which fuel types does LIHEAP furnish higher benefits to high burden households compared to average households? *[Hint: Look at Figure 2-4 in the State Snapshot]*

    - Circle all fuel types for which high burden households receive a higher benefit in the Answer Sheet.

Electric, Natural Gas, Fuel Oil, Propane, and Other Fuels

17. For which fuel types does LIHEAP pay a higher share of the energy bill for high burden households compared to average households? *[Hint: Look at Figure 2-6 in the State Snapshot]*

- Circle all fuel types for which LIHEAP pays a higher share of the energy bill for high burden households in the Answer Sheet.

Electric, Natural Gas, Fuel Oil, Propane, and Other Fuels

18. For which fuel types does LIHEAP furnish more preventions than restorations due to bill payment issues? *[Hint: Look at Figure 5-1 in the State Snapshot]*

    - Circle all fuel types for which LIHEAP furnishes more preventions than restorations in the Answer Sheet.

    Electric, Natural Gas, Fuel Oil, Propane, and Other Fuels

19. For which fuel types does LIHEAP furnish more preventions than restorations due to energy equipment issues? *[Hint: Look at Figure 5-2 in the State Snapshot]*

    - Circle all fuel types for which LIHEAP furnishes more preventions than restorations in the Answer Sheet.

    None.

20. Based on the investigation above, do you think that Minnesota needs to examine some aspect of their program related to targeting benefits? If so, what?

    - Write a sentence or two in the Answer Sheet.

21. Based on the investigation above, do you think that Minnesota needs to examine some aspect of their program related to preventions and restorations? If so, what?

    - Write a sentence or two in the Answer Sheet.

Understanding LIHEAP Performance Measures
Hands-On Exercises
QUESTION SHEET

Example #3 – Mississippi

Please open Mississippi's Executive Summary and State Snapshot, using the instructions in the beginning of this document.

1. Does Mississippi furnish higher benefits to higher burden households?

    - Circle Yes or No in the Answer Sheet.

    Yes.

2. The benefit for high burden households in Mississippi is $_____ higher / lower.

    - Record the dollar amount in the Answer Sheet.
    - Circle Higher or Lower to correctly complete the sentence in the Answer Sheet.

    The benefit for high burden households in Mississippi is $64 **higher**.

3. Does Mississippi pay a larger share of the home energy bill for high burden households?

    - Circle Yes or No in the Answer Sheet.

    No.

4. Does Mississippi prevent service loss more times than it restores service when clients face bill payment issues?

    - Circle Yes or No in the Answer Sheet.

    No.

5. Mississippi prevented service loss 6,151 more / **less** times than it restored service when clients faced bill payment issues?

    - Record the number of occurrences in the Answer Sheet.
    - Circle More or Less to correctly complete the sentence in the Answer Sheet.

    Mississippi prevented service loss 6,151 **less** times than it restored service when clients faced bill payment issues.

    CALCULATION STEPS:

    1. Mississippi prevented service loss 5,462 times as a result of bill payment assistance, which is less than the 11,613 times it restored service due to bill payment assistance.

2. Calculate the difference of the times Mississippi prevented service loss due to bill payment assistance and the number of times it restored service due to bill payment assistance: 11,613 – 5,462 = 6,151.

6. Does Mississippi restore service more times than it prevents service loss when clients face energy equipment issues?

    - Circle Yes or No in the Answer Sheet.

    Yes.

7. Mississippi restored service 605 **more** / less times than it prevented service loss when clients faced energy equipment issues?

    - Record the number of occurrences in the Answer Sheet.
    - Circle More or Less to correctly complete the sentence in the Answer Sheet.

    Mississippi restored service 605 **more** times than it prevented service loss when clients faced energy equipment issues.

    CALCULATION STEPS:

    1. Mississippi restored service 619 times as a result of equipment repair and replacement, which is more than the 14 times it prevented service loss due to equipment repair and replacement.
    2. Calculate the difference of the times Mississippi prevented service loss due to equipment repair and replacement and the number of times it restored service due to equipment repair and replacement: 619 – 14 = 605.

8. What are the annual incomes of average households and high burden households in Mississippi?

    - Record the dollar amount of the annual income for average households and high burden households in the Answer Sheet.

    The annual income for an average household is $9,601 and the annual income for high burden households is $1,393.

9. The annual income of high burden households is _____ % more / less than average households?

    - Record the percentage in the Answer Sheet.
    - Circle More or Less to correctly complete the sentence in the Answer Sheet.

    The annual income of high burden households is 85% **less** than average households.

    CALCULATION STEPS:

    1. High burden average income is $1,393, which is less than the average income of $9,601 for all households.

2. To calculate the percent less, first calculate the difference in average income between high burden households and all households: $ 9,601 – $1,393 = $8,208.
3. Next, divide the difference of $8,208 by the average income for all households to estimate the percent decrease: $8,208 / $9,601 = 0.8549, which represents a percentage of about 85%.

10. What are the annual energy expenditures of average households and high burden households in Mississippi?

    - Record the dollar amount of the annual energy expenditures for average households and high burden households in the Answer Sheet.

The annual energy expenditures of average households are $1,955 and the annual energy expenditures for high burden households are $2,105.

11. The annual energy expenditures of high burden households is _____ % more / less than average households?

    - Record the percentage in the Answer Sheet.
    - Circle More or Less to correctly complete the sentence in the Answer Sheet.

The annual energy expenditures of high burden households are 8% **more** than average households.

CALCULATION STEPS:

1. High burden average annual energy expenditure is $2,105, which is more than the average energy expenditure of $1,955 for all households.
2. To calculate the percent more, first calculate the difference in average energy expenditures between high burden households and all households: $2,105 – $1,955 = $150.
3. Next, divide the difference of $150 by the average energy expenditure for all households to estimate the percent increase: $150 / $1,955 = 0.0767, which represents a percentage of about 8%.

12. Before LIHEAP, the energy burden of high burden households is _____% of average households?

    - Record the percentage in the Answer Sheet.

The energy burden of high burden households is 741% of average households.

CALCULATION STEPS:

1. Divide the energy burden of 151.1% for high burden households by the energy burden of 20.4% for average households: 151.1% / 20.4% = 7.407, which represents a percentage of about 741%.

13. The average benefit for high burden households is _____% of average households?

- Record the percentage in the Answer Sheet.

The average benefit of high burden households is 114% of average households.

CALCULATION STEPS:

1. Divide the average benefit of $525 for high burden households by the average benefit of $461 for average households: $525 / $461 = 1.139, which represents a percentage of about 114%.

14. After LIHEAP, the energy burden of high burden households is _____% of average households?

- Record the percentage in the Answer Sheet.

The energy burden of high burden households is 727% of average households.

CALCULATION STEPS:

1. Divide the energy burden of 113.4% for high burden households by the energy burden of 15.6% for average households: 113.4% / 15.6% = 7.269, which represents a percentage of about 727%.

15. After completing Questions #12 – 14, what are your thoughts about those comparisons?

- Write a sentence or two in the Answer Sheet.

16. For which fuel types does LIHEAP furnish higher benefits to high burden households compared to average households?

- Circle all fuel types for which high burden households receive a higher benefit in the Answer Sheet.

Electric and Natural Gas

17. For which fuel types does LIHEAP pay a higher share of the energy bill for high burden households compared to average households?

- Circle all fuel types for which LIHEAP pays a higher share of the energy bill for high burden households in the Answer Sheet.

Electric

18. For which fuel types does LIHEAP furnish more preventions than restorations due to bill payment issues?

- Circle all fuel types for which LIHEAP furnishes more preventions than restorations in the Answer Sheet.

Electric

19. For which fuel types does LIHEAP furnish more preventions than restorations due to energy equipment issues?

    - Circle all fuel types for which LIHEAP furnishes more preventions than restorations in the Answer Sheet.

    None

20. Based on the investigation above, do you think that Mississippi needs to examine some aspect of their program related to targeting benefits? If so, what?

    - Write a sentence or two in the Answer Sheet.

21. Based on the investigation above, do you think that Mississippi needs to examine some aspect of their program related to preventions and restorations? If so, what?

    - Write a sentence or two in the Answer Sheet.

Understanding LIHEAP Performance Measures
Hands-On Exercises
QUESTION SHEET

Example #4 – Wyoming

Please open Wyoming's Executive Summary and State Snapshot, using the instructions in the beginning of this document.

1. Does Wyoming furnish higher benefits to higher burden households?

    - Circle Yes or No in the Answer Sheet.

    Yes.

2. The benefit for high burden households in Wyoming is $_____ higher / lower.

    - Record the dollar amount in the Answer Sheet.
    - Circle Higher or Lower to correctly complete the sentence in the Answer Sheet.

    The benefit for high burden households in Wyoming is $225 **higher**.

3. Does Wyoming pay a larger share of the home energy bill for high burden households?

    - Circle Yes or No in the Answer Sheet.

    Yes.

4. Does Wyoming prevent service loss more times than it restores service when clients face bill payment issues?

    - Circle Yes or No in the Answer Sheet.

    Yes.

5. Wyoming prevented service loss _____ more / less times than it restored service when clients faced bill payment issues?

    - Record the number of occurrences in the Answer Sheet.
    - Circle More or Less to correctly complete the sentence in the Answer Sheet.

    Wyoming prevented service loss 69 **more** times than it restored service when clients faced bill payment issues.

    CALCULATION STEPS:

    1. Wyoming prevented service loss 1,613 times as a result of bill payment assistance, which is more than the 1,544 times it restored service due to bill payment assistance.

2. Calculate the difference of the times Wyoming prevented service loss due to bill payment assistance and the number of times it restored service due to bill payment assistance: 1,613 – 1,544 = 69.

6. Does Wyoming restore service more times than it prevents service loss when clients face energy equipment issues?

   - Circle Yes or No in the Answer Sheet.

   Yes.

7. Wyoming restored service _____ more / less times than it prevented service loss when clients faced energy equipment issues?

   - Record the number of occurrences in the Answer Sheet.
   - Circle More or Less to correctly complete the sentence in the Answer Sheet.

   Wyoming restored service 347 **more** times than it prevented service loss when clients faced energy equipment issues.

   CALCULATION STEPS:

   1. Wyoming restored service 359 times as a result of equipment repair and replacement, which is more than the 12 times it prevented service loss due to equipment repair and replacement.
   2. Calculate the difference of the times Wyoming prevented service loss due to equipment repair and replacement and the number of times it restored service due to equipment repair and replacement: 359 – 12 = 347.

8. What are the annual incomes of average households and high burden households in Wyoming?

   - Record the dollar amount of the annual income for average households and high burden households in the Answer Sheet.

   The annual income for an average household is $15,665 and the annual income for high burden households is $7,079.

9. The annual income of high burden households is _____ % more / less than average households?

   - Record the percentage in the Answer Sheet.
   - Circle More or Less to correctly complete the sentence in the Answer Sheet.

   The annual income of high burden households is 55% **less** than average households.

   CALCULATION STEPS:

   1. High burden average income is $7,079, which is less than the average income of $15,665 for all households.

2. To calculate the percent less, first calculate the difference in average income between high burden households and all households: $15,665 – $7,079 = $8,586.
3. Next, divide the difference of $8,586 by the average income for all households to estimate the percent decrease: $8,586 / $15,665 = 0.548, which represents a percentage of about 55%.

10. What are the annual energy expenditures of average households and high burden households in Wyoming?

    - Record the dollar amount of the annual energy expenditures for average households and high burden households in the Answer Sheet.

    The annual energy expenditures of average households are $1,526 and the annual energy expenditures for high burden households are $1,895.

11. The annual energy expenditures of high burden households is _____ % more / less than average households?

    - Record the percentage in the Answer Sheet.
    - Circle More or Less to correctly complete the sentence in the Answer Sheet.

    The annual energy expenditures of high burden households are 24% **more** than average households.

    CALCULATION STEPS:

    1. High burden average annual energy expenditure is $1,895, which is more than the average energy expenditure of $1,526 for all households.
    2. To calculate the percent more, first calculate the difference in average energy expenditures between high burden households and all households: $1,895 – $1,526 = $369.
    3. Next, divide the difference of $150 by the average energy expenditure for all households to estimate the percent increase: $369 / $1,526 = 0.2418, which represents a percentage of about 24%.

12. Before LIHEAP, the energy burden of high burden households is _____% of average households?

    - Record the percentage in the Answer Sheet.

    The energy burden of high burden households is 276% of average households.

    CALCULATION STEPS:

    1. Divide the energy burden of 26.8% for high burden households by the energy burden of 9.7% for average households: 26.8% / 9.7% = 2.763, which represents a percentage of about 276%.

13. The average benefit for high burden households is _____% of average households?

- Record the percentage in the Answer Sheet.

The average benefit of high burden households is 144% of average households.

CALCULATION STEPS:

1. Divide the average benefit of $736 for high burden households by the average benefit of $511 for average households: $736 / $511 = 1.440, which represents a percentage of about 144%.

14. After LIHEAP, the energy burden of high burden households is _____% of average households?

- Record the percentage in the Answer Sheet.

The energy burden of high burden households is 252% of average households.

CALCULATION STEPS:

1. Divide the energy burden of 16.4% for high burden households by the energy burden of 6.5% for average households: 16.4% / 6.5% = 2.523, which represents a percentage of about 252%.

15. After completing Questions #12 – 14, what are your thoughts about those comparisons?

- Write a sentence or two in the Answer Sheet.

16. For which fuel types does LIHEAP furnish higher benefits to high burden households compared to average households?

- Circle all fuel types for which high burden households receive a higher benefit in the Answer Sheet.

Electric, Natural Gas, Propane

17. For which fuel types does LIHEAP pay a higher share of the energy bill for high burden households compared to average households?

- Circle all fuel types for which LIHEAP pays a higher share of the energy bill for high burden households in the Answer Sheet.

Electric, Natural Gas, Propane

18. For which fuel types does LIHEAP furnish more preventions than restorations due to bill payment issues?

- Circle all fuel types for which LIHEAP furnishes more preventions than restorations in the Answer Sheet.

Propane

19. For which fuel types does LIHEAP furnish more preventions than restorations due to energy equipment issues?

    - Circle all fuel types for which LIHEAP furnishes more preventions than restorations in the Answer Sheet.

Fuel Oil

20. Based on the investigation above, do you think that Wyoming needs to examine some aspect of their program related to targeting benefits? If so, what?

    - Write a sentence or two in the Answer Sheet.

21. Based on the investigation above, do you think that Wyoming needs to examine some aspect of their program related to preventions and restorations? If so, what?

    - Write a sentence or two in the Answer Sheet.