**INVESTIGATION: Which is cheaper: a shower or a bath?**

**Objective:** To solve problems which involve linear equations.

**Prediction:**

Do you think the shower or bath is cheaper? Explain.

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**Procedure:**

1. Watch the video.
2. Discuss with your partner the information required to use linear equations in slope-intercept form to answer the question above.
3. Ms. Skehill will give you the required information.
4. Create linear equations to represent the situations, graph them and uses them to come up with a solution to the problem.
5. Complete the discussion questions.

**Information Required:**

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**Solution:** For the shower and the bath use the slope and intercept to create linear equations in slope-intercept form to represent the two relations. Graph both of the linear equations. Show the calculations involved in answering the inquiry question.

|  |  |
| --- | --- |
| **Shower** | **Bath** |
| **Linear Equation:** | **Linear Equation:** |
| **Graph:** | **Graph:** |
| **Calculation:** | **Calculation:** |
| **Which is cheaper: a shower or a bath?** | |

**Discsussion Questions:**

How would the situation have to change for the answer to reverse itself?

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How long of a shower can he have with the same amount of water he used for the bath? Use an equation and show all of your work.

Research 3 ways you can conserve fresh water:

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Which is cheaper for you? Collect data on your own shower and bath usage