1. David is going out for a pizza. The pizza costs $10.50 plus $1.50 for each extra topping, $x$. Write an equation to represent the total cost of the pizza, $t$.

**Dependent variable:** ________________________________

**Independent variable:** ______________________________

**Equation:** ________________________________________

Use your equation to determine the total cost of the pizza with 3 extra toppings.

The total cost of the pizza is __________________________

2. Alex is going on a road trip. She travels at a rate of 65 miles per hour. Write an equation that represents the distance, $d$, that Alex could travel for a given number of hours, $h$.

**Dependent variable:** ________________________________

**Independent variable:** ______________________________

**Equation:** ________________________________________

Use your equation to see how far Alex would drive in 8 hours.

The distance Alex would drive is _________________________
3. Chloe is buying snacks for a party. She plans on buying a cake for $17.95 and some chips for $3.49 per bag, \( b \). Write an equation to represent the total cost, \( t \), for Chloe’s snacks.

Dependent variable: ______________________________________________________________

Independent variable: ___________________________________________________________

Equation: ______________________________________________________________________

Use your equation to determine the total cost if Chloe buys 6 bags of chips.

Ainsley’s total cost at the movies is ____________________

4. Ainsley is going to the movies. The movie ticket costs $9.75. Snacks, \( s \), cost $4.75 each. Write an equation to represent the total cost, \( t \), of Ainsley’s trip to the movies.

Dependent variable: ______________________________________________________________

Independent variable: ___________________________________________________________

Equation: ______________________________________________________________________

Use your equation to determine Ainsley’s total cost at the movies if she buys 3 snacks.

Ainsley’s total cost at the movies is ____________________

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5. Oliver streams movies through a company that charges $4.99 per month and $1.99 per movie, \( m \). Write an equation to represent the total cost, \( t \), per month.

- Dependent variable: _______________________________________________________
- Independent variable: __________________________________________________
- Equation: _____________________________________________________________________

Use your equation to determine the monthly cost if Oliver watched 5 movies.

6. Luis’ family is going on a camping trip. It costs $15.50 per day, \( d \), and $25.00 per cabin, \( c \). Write an equation to represent the total cost, \( t \), of the camping trip.

- Dependent variable: _______________________________________________________
- Independent variables: _____________________________________________________
- Equation: _____________________________________________________________________

Use your equation to determine the total cost for staying 5 days in 2 cabins.

The total cost for the trip would be _____________________
**Independent and Dependent Variables**

**Writing and Solving Equations**

1. **Dependent variable:** total cost \((t)\)  
   **Independent variable:** number of toppings \((x)\)  
   **Equation:** \(t = 10.50 + 1.50x\) or \(t = 1.50x + 10.50\)

2. **Dependent variable:** distance traveled \((d)\)  
   **Independent variable:** number of hours \((h)\)  
   **Equation:** \(d = 65h\)

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**Oliver’s total cost this month would be \(\$14.94\)**

\[t = 4.99 + 1.99m\]
\[= 4.99 + 1.99(5)\]
\[= 4.99 + 9.95\]
\[= 14.94\]

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**The total cost for the trip would be \(\$127.50\)**

\[t = 15.50d + 25c\]
\[= 15.50(5) + 25(2)\]
\[= 77.50 + 50\]
\[= 127.50\]