

Writing and Solving Expressions from Word Problems

Write an Expression and Solve for the Given Variable.

1. To rent a kayak at the beach, there is an initial fee of \$34. For each hour the kayak is rented, there is an additional \$5 fee. Write an expression to calculate the total cost of renting the kayak for h hours.

Expression: $34 + 5h$

Using your expression, find out the total cost of renting a kayak for 4 hours.

Total Cost: $\frac{34 + 5(4)}{34 + 20} = \54

2. Apex Middle School was selling tickets for a school play. The price of an adult ticket was \$9 and the price of a student ticket was \$5. Write an expression that represent the total amount of money collected.

Expression: $9a + 5s$

Suppose 150 adult tickets were sold and 110 student tickets were sold. How much money was collected?

$$\begin{array}{r} 4 \ 150 \\ \times \quad 9 \\ \hline 1,350 \end{array}$$

$$\begin{array}{r} 110 \\ \times \quad 5 \\ \hline 550 \end{array} + \begin{array}{r} 1350 \\ \hline 1,900 \end{array}$$

Total Amount Collected: $\frac{9(150) + 5(110)}{\$1,900}$

\$1,900

- Tom is 5 less than double Bob's age. Let b represent Bob's age. Write an expression to represent Tom's age.

Expression: $2b - 5$

Using your expression from above, find out the age of Tom if Bob is 10 years old.

Tom's age: $\frac{2(10) - 5}{20 - 5} = 15 \text{ years old}$

Pam has 2 times as many pencils as Laura. If p represents the number of pencils Laura has, write an expression that represents the number of pencils Pam and Laura have together?

$2p$

Expression: $2p + p$