

## Writing Expressions for Word Problems Worksheets

1. Sally designs web pages for customers. She charges \$135.50 per web page; however, she must pay a monthly rental fee of \$650 for her office. Write an expression to determine her take-home pay after expenses. If Sally designed 5 web pages last month, what was her take-home pay after expenses?

2. While shopping, Megan and her friend Rylie find a pair of boots on sale for 25% off the original price. Megan calculates the final cost of the boots by first deducting the 25% and then adding the 6% sales tax. Rylie thinks Megan will pay less if she pays the 6% sales tax first and then takes the 25% discount.

a) Write an expression to represent each girl's scenario if the original price of the boots was  $x$  dollars.

3. Evaluate each expression if the boots originally cost \$200.

4. Who was right? Explain how you know.

Go to [onlinemathlearning.com](https://www.onlinemathlearning.com) for more free math resources

## Writing Expressions for Word Problems Worksheets

1. Sally designs web pages for customers. She charges \$135.50 per web page; however, she must pay a monthly rental fee of \$650 for her office. Write an expression to determine her take-home pay after expenses. If Sally designed 5 web pages last month, what was her take-home pay after expenses?

*w = number of webpages Sally designs*

$$135.50w - 650$$

$$135.50(5) - 650$$

$$27.50$$

*After expenses, Sally's take-home pay is \$27.50.*

2. While shopping, Megan and her friend Rylie find a pair of boots on sale for 25% off the original price. Megan calculates the final cost of the boots by first deducting the 25% and then adding the 6% sales tax. Rylie thinks Megan will pay less if she pays the 6% sales tax first and then takes the 25% discount.

a) Write an expression to represent each girl's scenario if the original price of the boots was  $x$  dollars.

*Megan*

$$(x - 0.25x) + 0.06(x - 0.25x)$$

$$1.06(x - 0.25x)$$

$$1.06(0.75x)$$

*Rylie*

$$(x + 0.06x) - 0.25(x + 0.06x)$$

$$0.75(x + 0.06x)$$

$$0.75(1.06x)$$

3. Evaluate each expression if the boots originally cost \$200.

*Megan*

$$1.06(0.75x)$$

$$1.06(0.75(200))$$

$$159$$

*Rylie*

$$0.75(1.06x)$$

$$0.75(1.06(200))$$

$$159$$

*Using both Megan's and Rylie's methods would show that the boots would cost \$159.*

4. Who was right? Explain how you know.

*Neither girl was right. They both pay the same amount.*

Go to [onlinemathlearning.com](http://onlinemathlearning.com) for more free math resources