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Sometimes people use letters to represent unspecified amounts. Such letters are called variables. For example, if you worked for \$6 an hour, you would multiply the time you worked by 6 to find out what you earned. If we let t represent the time you worked, we could show the amount of money you earned with this expression.

$$6 \times t$$

When we say, “evaluate the expression when $t = 3$,” we mean, “figure out how much money you would make if you worked for 3 hours.” To do this, substitute 3 for t and complete the calculation:

- 1 Evaluate the expression $6 \times t$ when:

$t = 2$

$t = 4$

$t = 5$

$t = 8$

- 2 How much money would you make if you worked 15 hours and earned \$6 per hour?

- 3 Evaluate the following expressions when each variable has the value shown.

$4 + b$ when $b = 10$ $4 + 10 = 14$	
$4 + b$ when $b = 23$ $4 + 23 = 27$	$4 + b$ when $b = 103$
$(3 \times n) - 2$ when $n = 2$	$(3 \times n) - 2$ when $n = 4$
$2 \times (k + 12)$ when $k = 7$	$2 \times (k + 12)$ when $k = 10$

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- 4** Danny is trying to earn money to buy a new bike. His neighbor says he will pay him \$4 per hour to help with yard work. His mom says she will give him a \$10 bill to add to his savings after he helps his neighbor. Which expression shows how much money Danny will make? (The letter t stands for the number of hours Danny will work for his neighbor.)

$4 + t + 10$

$4 \times t + 10 \times t$

$4 \times t + 10$

$14 \times t$

- a** How much money will Danny make if he works for 4 hours with his neighbor? Show all your work.

- b** If Danny wants to earn \$34, how many hours will he have to work? Show all your work.

- 5** **CHALLENGE** Pick one of the expressions from 3 above that does not represent Danny's situation. Describe a situation where the expression you chose would represent how much money Danny would make.

- a** The expression I chose is:

- b** This expression would show how much money Danny would make if...