

**1-7****Practice: Skills****Writing Expressions and Equations 2**

define the variable  
when  
needed

Write each verbal phrase as an algebraic expression.

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| 1. a number divided by 5<br>$n = \text{a number}$                | 2. the sum of $d$ and 7  |
| 3. the product of 10 and $c$                                     | 4. the difference of $t$ and 1                                   |
| 5. the score increased by 8 points<br>$S = \text{score}$ $S + 8$ | 6. the cost split among 4 people<br>$C = \text{cost}$ $C \div 4$ |
| 7. the cost of 7 CDs at $\$d$ each                               | 8. the height decreased by 2 inches                              |
| 9. \$500 less than the sticker price                             | 10. the total of Ben's score and 75                              |
| 11. 2 hours more than the estimate                               | 12. 25 times the number of students                              |

Write each verbal sentence as an algebraic equation.

13. The sum of a number and 16 is equal to 45.
14. The product of 6 and  $m$  is 216.
15. The difference of 100 and  $x$  is 57.
16. The quotient of  $z$  and 10 is equal to 32.
17. \$12 less than the original price is \$48.
18. 17 more than some number is equal to 85.
19. The number of members divided by 6 is 15.
20. The total of Joshua's savings and \$350 is \$925.
21.  $-65$  is 5 times a number.
22. The total area decreased by 75 square feet is 250 square feet.
23. The cost of 10 books at  $\$d$  each is \$159.50.
24. Carla's height plus 4 inches is 68 inches.

**Practice: Word Problems****Algebra: Variables and Expressions**

<p><b>1. FIELD TRIP</b> The seventh grade math classes are going on a field trip. The field trip will cost \$7 per student. Write an expression to find the cost of the field trip for <math>s</math> students. What is the total cost if 26 students go on the trip?</p> <p style="text-align: center;">7 • s 7 • 26 = \$182</p>	<p><b>2. SOCCER</b> Jason earns \$20 per game as a referee in youth soccer games. Write an expression to find how much money Jason will earn for refereeing any number of games. Let <math>n</math> represent the number of games Jason has refereed. How much will he earn for refereeing 6 games?</p>
<p><b>3. PROFIT</b> The expressions <math>c - e</math>, where <math>c</math> stands for the money collected and <math>e</math> stands for the expenses, is used to find the profit from a basketball concession. If \$500 was collected and expenses were \$150, find the profit for the concession.</p>	<p><b>4. SAVINGS</b> Kata has a savings account that contains \$230. She decides to deposit \$5 each month from her monthly earnings for baby-sitting after school. Write an expression to find how much money Kata will have in her savings account after <math>x</math> months. Let <math>x</math> represent the number of months. Then find out how much she will have in her account after 1 year.</p>
<p><b>5. MONEY</b> Mr. Wilson has \$2,500 in his savings account and <math>m</math> dollars in his checking account. Write an expression that describes the total amount that he has in both accounts.</p>	<p><b>6. ANIMALS</b> Write an expression to represent the total number of legs on <math>h</math> horses and <math>c</math> chickens. How many legs are there in 5 horses and 6 chickens?</p>
<p><b>7. T-SHIRTS</b> The band wants to order T-shirts. The T-shirts cost \$15 each plus a shipping fee of \$10. Write an expression to find the total cost of <math>c</math> T-shirts.</p>	<p><b>8. TEMPERATURE</b> The expression <math>\frac{9}{5}C + 32</math>, where <math>C</math> stands for temperature in degrees Celsius, is used to convert Celsius to Fahrenheit. If the temperature is 20 degrees Celsius, find the temperature in degrees Fahrenheit.</p>