

NAME \_\_\_\_\_

DATE \_\_\_\_\_

# Module Test **A**

**Module 4**

**Write an equation to represent each sentence or situation.**

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|---|--|
| <p>1. The product of a number and seven, decreased by one, is twenty-seven.</p> <p>_____</p>  | <p>2. Negative four times the sum of a number and twelve is sixteen.</p> <p>_____</p>                                      |
| <p>3. The cost of <math>n</math> lamps is \$420. The cost of one lamp is \$84.</p> <p>_____</p>   | <p>4. Nadine is <math>b</math> years old. Her mother is 26 years older. The sum of their ages is 68.</p> <p>_____</p>      |
| <p>5. Jerrold has four times as many game cartridges as Arnold. They have 30 game cartridges total.</p> <p>_____</p>  | <p>6. Six less than twice a number is the same as one more than three times the number.</p> <p>_____</p>                   |
| <p>7. In a certain right triangle, the base is equal to half the height. The area of the triangle is 36 square inches. (Hint: the formula for the area of a triangle is <math>A = \frac{1}{2}bh</math>.)</p> <p>_____</p> | <p>8. A test contained 25 questions. Hank got <math>c</math> questions correct and seven questions wrong.</p> <p>_____</p> |

**Solve.**

- |  |  |
|--|--|
| <p>9. Evelyn worked 17 hours at an hourly rate of <math>d</math> dollars per hour. What is <math>d</math> if she earned \$114.75?</p> <p>_____</p>               | <p>10. A satellite TV service charges \$41.99 per month for basic service, plus \$8.99 for each pay-per-view movie. How many movies were purchased if a total monthly bill was \$95.93?</p> <p>_____</p> |
| <p>11. The sum of three consecutive integers is 54. What are the three integers?</p> <p>_____</p>  | <p>12. The sum of two consecutive even integers is <math>-30</math>. What are the two integers?</p> <p>_____</p>   |
| <p>13. A real estate agent earns a commission of 3% of the sale price of a home. What is the sale price of a home if her commission is \$4,800?</p> <p>_____</p> | <p>14. Sheryl paid \$24 for a new basketball. The store's markup is 20%. What was the wholesale cost of the basketball?</p> <p>_____</p>   |

- 15.** A shopper bought a new keyboard for \$48.60, which included an 8% sales tax. What was the price of the keyboard, not including tax?
- \_\_\_\_\_
- 17.** In a triangle, the first side is 3 in. shorter than the second side. The third side is 1 in. longer than the second side. What is the length of the longest side if the perimeter is 25 in.?
- \_\_\_\_\_
- 19.** In an isosceles triangle, the measure of the vertex angle is  $30^\circ$  less than the measure of each base angle. Find the measure of each base angle.
- \_\_\_\_\_
- 21.** Green Grass Seed Mix contains 30% rye grass. How much Green Grass Seed Mix should be mixed with 6 lb of pure rye grass seed to make a mixture that is 72% rye grass?
- \_\_\_\_\_
- 23.** Two cars leave a toll booth at the same time, going in opposite directions. Car A travels at a constant rate 10 mph faster than car B. What is the rate of each car if they are 306 miles apart after 3 hours?

**A.** Draw a picture that can help you solve this problem.

**B.** Write an equation to solve this problem. \_\_\_\_\_

**C.** Identify what the variable stands for. \_\_\_\_\_

**D.** Solve the problem. Be sure to answer the question, and then show how to check your answer.

