

3.R.3 Exercises

Concept Check

True/False. Determine whether each statement is true or false. If a statement is false, explain how it can be changed so the statement will be true. (**Note:** There may be more than one acceptable change.)

1. If an odd integer is divided by 2, the remainder will be 1.
2. To find 3 consecutive odd integers, you could use n , $n + 1$, and $n + 3$.
3. Odd integers are integers that are divisible by 1.
4. Even integers are consecutive if each is 2 more than the previous even integer.

Practice

Read each problem carefully, translate the various phrases into algebraic expressions, set up an equation, and solve the equation.

5. Five less than a number is equal to 13 decreased by the number. Find the number.
6. Twice a number increased by 3 times the number is equal to 4 times the sum of the number and 3. Find the number.
7. Find three consecutive integers whose sum is 93.
8. Find three consecutive odd integers such that the sum of twice the first and three times the second is 7 more than twice the third.

Applications

Solve.

- 9. Expenses:** A collect call from a landline in Ohio to another landline in Ohio has a connection fee of \$2.75 and a charge of \$0.36 per minute. Mr. Anderson made a collect call which cost the receiver of the call \$9.95. This situation can be modeled by $\$9.95 = \$2.75 + \$0.36m$.
- The unknown value is represented by the variable m in the equation. What is the unknown value in this situation?
 - Solve the equation for the variable.
 - What does the answer to Part **b.** mean? Write a complete sentence.
- 10. Event Planning:** Robin is in charge of purchasing desserts for a dinner party that her nonprofit organization is throwing. She decides to buy a cake and several specialty cupcakes from Barbara's Bombtastic Bakery. She needs to buy one 8-inch round cake which costs \$19.50. She has \$45 to spend and will spend the leftover amount on cupcakes, which are \$8.50 for a box of 4. How many boxes of cupcakes can Robin purchase?
- What is the unknown value in this problem? Let the variable c represent this unknown value.
 - Write an equation to represent this situation.
 - Solve the equation for the variable.
 - What does the answer to Part **c.** mean? Write a complete sentence.

