Algebra 1 Review for 1-1 to 1-4 Test

1. Tell which set or sets the number below belongs​ to: natural​ numbers, whole​ numbers, integers, rational​ numbers, irrational​ numbers, or real numbers.

a. 8 b.  c. 

2. Is the difference of two rational numbers always a rational​ number? Explain.

3. Decide whether the sum represents a rational number or an irrational number. Explain how you know without simplifying.



4. A bee flies at 20 feet per second directly to a flowerbed from its hive. The bee stays at the flowerbed for 14 minutes, and then flies directly back to the hive at 12 feet per second. It is away from the hive for a total of 18 minutes.

**a.** What equation can you use to find the distance of the flowerbed from the​ hive?

**b.** How far is the flowerbed from the​ hive?

5. Solve the equation for x. 

6. Solve the equation for x. 

7. Solve the equation for y. 

8. Classify the variable according to the set of numbers that best describes its values.

The length L of a particular object found by using the formula 

9. Anna bought 8 tetras and 2 rainbow fish for her aquarium. The rainbow fish cost​ $6 more than the tetras. She paid a total of​ $37.

a. Write an equation for the situation and define your variables.

b. True or false: The cost of 4 tetras is the same as the cost of a rainbow fish.

10. Solve for y. 

11. Find the missing value in the equation below that makes it an identity. 

12. Write the numbers in decreasing order.



13. Solve the equation. 

14. Solve the equation for z. 

15. Dolbear’s law states the relationship between the rate at which Snowy Tree Crickets chirp and the air temperature of their environment. The formula is  , where T is a temperature in degrees Fahrenheit and N is a number of chirps per minute. If , find the number of chirps per minute.

16. Solve the equation for x. 

17. Trevor has a gift card for $60 that loses $2.50 for each 30-day period it is not used. He has another gift card for $50 that loses $2 for each 30-day period it is not used. Write and solve an equation for the number of 30-day periods until the value of the gift cards will be equal. What will the value of each card be when they have equal value?

18. Solve the formula  for 

19. Solve the equation  for 