**Drill 6: Solving equations**

Solve

1. \( \frac{5}{8} \cdot x - \frac{1}{2} = \frac{3}{4} \)

2. \( 0.7p + 0.3 = 3.1 \)

3. \( 3(a + 4) = 7a \)

4. \( 15 = 3(7y - 2) \)

5. \( 7n - (3n - 5) = 21 \)

6. \( x + (x - 7) = (x + 5) - (x + 2) \)

7. \( (t + 7)(t - 6) = 0 \)

8. \( (2a - 5)(3a - 1) = 0 \)

9. \( y(y - 9) = 0 \)

10. \( m(m + 5) = 0 \)

Solve

11. A 15-cm piece of wood is cut into two pieces. One piece is 7 cm longer than the other. How long are these pieces?

12. Seven more than four times a number is the same as five less than eight times the number. What is the number?

13. Find two consecutive odd integers such that three times the first plus two times the second is 39.

14. A used-car dealer drops the price of a used car 23% to a sale price of $693. What was the former price?

Solve

15. \( C = 2\pi r \), for \( r \)

16. \( V = lwh \), for \( h \)

17. \( A = \frac{1}{2}bh \), for \( b \)

18. \( P = a + b + c \), for \( b \)

19. \( A = P + Prt \), for \( r \)

20. \( Q = 2\pi r + h \), for \( r \)

21. You are taking a physics course. There will be four tests. You have scored 86, 93, and 89 on the first three tests. You must make a total of 360 or more to get an A. What score on the last test will give you an A.

22. A car rents for $14.40 per day plus 12 cents per mile. You have $84 budgeted to rent a car for 1 day. How many miles can you travel and still stay within your budget?