3.2 Solve Two-Step Equations

pp. 141–146

EXAMPLE

Solve $4x - 9 = 3$.

$4x - 9 = 3$	**Write original equation.**
$4x - 9 + 9 = 3 + 9$	**Add 9 to each side.**
$4x = 12$	**Simplify.**
$\frac{4x}{4} = \frac{12}{4}$	**Divide each side by 4.**
$x = 3$	**Simplify.**

EXERCISES

EXAMPLES 1 and 2 on pp. 141–142 for Exs. 13–18

Solve the equation. Check your solution.

13. $9b + 5 = 23$

14. $11 = 5y - 4$

15. $\frac{n}{3} - 4 = 2$

16. $\frac{3}{2}v + 2 = 20$

17. $3t + 9t = 60$

18. $-110 = -4c - 6c$

3.3 Solve Multi-Step Equations

pp. 148–153

EXAMPLE

Solve $5x - 2(4x + 3) = 9$.

$5x - 2(4x + 3) = 9$	**Write original equation.**
$5x - 8x - 6 = 9$	**Distributive property**
$-3x - 6 = 9$	**Combine like terms.**
$-3x = 15$	**Add 6 to each side.**
$x = -5$	**Divide each side by −3.**

EXERCISES

EXAMPLES 1, 2, 3 and 4 on pp. 148–149 for Exs. 19–28

Solve the equation. Check your solution.

19. $3w + 4w - 2 = 12$

20. $z + 5 - 4z = 8$

21. $c + 2c - 5 - 5c = 7$

22. $4y - (y - 4) = -20$

23. $8a - 3(2a + 5) = 13$

24. $16h - 4(5h - 7) = 4$

25. $\frac{3}{2}(b + 1) = 3$

26. $\frac{4}{3}(2x - 1) = -12$

27. $\frac{6}{5}(8k + 2) = -36$

28. FOOTBALL You purchase 5 tickets to a football game from an Internet ticket agency. In addition to the cost per ticket, the agency charges a convenience charge of $2.50 per ticket. You choose to pay for rush delivery, which costs $15. The total cost of your order is $352.50. What is the price per ticket not including the convenience charge?