

You should be able to do the following.....

- 1. Simplify expressions using PEMDAS rules. (Section 1.2)

11. $6 - 4 + 8$

12. $4 + 16 \div 4$

13. $10 \div 2 - 3 \cdot 4$

14. $24 \div (7 - 5) \cdot -3$

15. $4 - (-6 + 2)^2$

16. $(4 \cdot 5)^2 \div (12 - 2)$

- 2. Evaluate an expression when given values for variables. (Section 1.2)

18. $10 - 2x$ when $x = 5$

19. $3x(x - 14)$ when $x = -1$

21. $x^2 - 25$ when $x = -7$

22. $-x^2 + 5x - 4$ when $x = 2$

- 3. Simplify expressions by combining terms. (Section 1.3)

24. $8 - 5x + 7x - 2$

25. $x + 9x^2 + 3x^2 - 11x$

27. $15 + 2(3x - 7)$

28. $3(x + 4) - 5(x - 2)$

29. A restaurant charges \$9.95 for a large pizza with two toppings, and \$1.25 for each additional topping. Write an algebraic model for the total cost C of a pizza with t toppings. Find the cost of a pizza with three toppings and the cost of a pizza with five toppings.

- 4. Solve equations. (Section 1.4)

30. $2x + 5 = -3$

31. $18 - 7x = 4$

32. $2x + 3 = 4x - 15$

33. $7x - 3 = 5x + 17$

34. $-(x + 2) = -8$

35. $6(x - 6) = -2x - 4$

36. $3(x - 1) = x + 7$

37. $\frac{x}{5} + 2 = -4$

38. $\frac{4}{9}x - \frac{1}{3} = \frac{3}{9}x + \frac{4}{3}$

47. A taxi charges \$3.50 plus \$1.75 per mile. Your ride in the taxi costs \$21.00. Write and solve an algebraic model to find the length (in miles) of your ride.

48. Tulip bulbs cost \$7 per pack. Crocus bulbs cost \$4 per pack. You buy n packs of each type of flower bulb and pay \$44. How many packs of each do you buy?

- 5. Solve absolute value equations. (Section 4.4)

19. $|x - 4| = 2$

20. $|x - 9| = 11$

21. $|2x - 6| = 4$

22. $|2x + 1| + 3 = 6$

* Remember: The absolute value of something cannot be a negative number!

- 6. Solve inequalities and graph the solution on a number line. (Section 4.1)

5. $x - 3 > 2$

6. $2x + 1 \geq -1$

7. $-6 < x - 5 \leq -1$

8. $-3 < 2x + 3 < 7$

9. $4x + 3 \leq -5$ or $x + 6 \geq 8$

10. $2x + 3 \leq 1$ or $3x - 2 > 7$

- 7. Solve absolute value inequalities and graph the solution on a number line. (Section 4.4)

23. $|x - 7| < 12$

24. $|x + 2| \leq 6$

25. $|2x - 5| \leq 9$

26. $|7x + 7| < 14$

27. $|x + 3| > 5$

28. $|2x + 1| \geq 3$

* Remember: great“er” = OR less th“an” = AND