1. Solve the following equation by using the addition principle. Check the solution.

    $16 = a - 5.4$

    The solution is a = $\boxed{21.4}$. (Type an integer or a decimal.)

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2. Solve using the addition principle. Don't forget to perform a check.

    $x + \dfrac{1}{8} = -\dfrac{3}{4}$

    The solution is x = $\boxed{-\dfrac{7}{8}}$.

    (Simplify your answer. Type a fraction.)

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3. Solve using the addition principle. Don't forget to perform a check.

    $x - \dfrac{5}{6} = \dfrac{7}{8}$

    The solution is x = $\boxed{\dfrac{41}{24}}$.

    (Type an integer or a simplified fraction.)

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4. Solve using the addition principle. Don't forget to perform a check.

    $5.4 = x + 3.7$

    The solution is x = $\boxed{1.7}$.
    (Type an integer or a decimal.)

---

5. Solve using the addition principle. Don't forget to perform a check.

    $6.4 = x - 3.7$

    The solution is x = $\boxed{10.1}$.
    (Type an integer or a decimal.)

---

6. Solve using the multiplication principle. Don't forget to check.

    $-19x = 38$

    The solution is x = $\boxed{-2}$.

---

7. Solve using the multiplication principle. Don't forget to check.

    $-9x = -99$

    The solution is x = $\boxed{11}$.

---

8. Solve using the multiplication principle. Don't forget to perform a check.

    $\dfrac{5}{13}x = 20$

    The solution is x = $\boxed{52}$.

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9. Solve the equation using the multiplication principle. Check your solution.

$$\frac{-x}{7} = 10$$

x = -70 (Simplify your answer.)

10. Solve using the multiplication principle. Don't forget to perform a check.

$$-\frac{5}{8}x = -\frac{9}{10}$$

The solution is x = 1.44 .
(Simplify your answer. Type an integer or a fraction.)

11. Solve using the multiplication principle. Don't forget to perform a check.

$$-4.6x = 46.0$$

The solution is x = -10 .
(Type an integer or a decimal.)

12. Solve using the multiplication principle. Don't forget to perform a check.

$$-\frac{4}{7}x = -33.52$$

The solution is x = 58.66 .
(Type an integer or a decimal.)

13. Solve. Don't forget to check!

$$-5x + 10 = 65$$

The solution is x = -11 .
(Type an integer or a simplified fraction.)

14. Solve and check.

$$\frac{5}{6}t - 1 = 14$$

The solution is t = 18 .
(Type an integer or a simplified fraction.)

15. Solve.

$$8x + 8x = 80$$

The solution is x = 5 .
(Type an integer or a simplified fraction.)

16. Solve.

$$-8x - 7x = 60$$

The solution is x = -4 .
(Type an integer or a simplified fraction.)

---

17. Solve.

$$x + \frac{1}{3}x = 16$$

The solution is x = $\boxed{12}$.

(Type an integer or a simplified fraction.)

---

18. Solve.

$$12.6x - 4.9x = -231$$

The solution is x = $\boxed{-30}$.

(Type an integer or a decimal.)

---

19. Solve using the principles together. Check your answer.

$$7y - 9 = 24 - 4y$$

The solution is y = $\boxed{3}$.

(Type an integer or a simplified fraction.)

---

20. Solve.

$$6 - 4x = 6x - 8x + 8$$

x = $\boxed{-1}$

(Type an integer or a simplified fraction.)

---

21. Solve. Don't forget to check.

$$3y - 2 + y + 30 = 5y + 30 - 3y$$

The solution is y = $\boxed{1}$.

(Type an integer or a simplified fraction.)

---

22. Solve. Clear fractions or decimals first.

$$\frac{7}{3}x + \frac{1}{3}x = 2x + \frac{6}{3} + \frac{5}{3}x$$

The solution is x = $\boxed{-2}$.

(Type an integer or a simplified fraction.)

---

23. Solve.

$$\frac{7}{2} + 5y = 10y - \frac{1}{4}$$

The solution is y = $\boxed{\dfrac{3}{4}}$.

(Type an integer or a simplified fraction.)

---

24.   Solve.

$$6.5x - 0.44 = 1.3 - 2.2x$$

The solution is x = 0.2 .
(Type an integer or a decimal.)

25.   Solve.

$$2(3 + 5x) - 4 = 62$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

A. The solution is x = 6 . (Simplify your answer.)

B. The solution is all real numbers.

C. There is no solution.

26.   Solve the following equation.

$$2(7x + 28) = 2(8x + 16)$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

A. The solution is x = 12 . (Simplify your answer.)

B. Every real number is a solution.

C. There is no solution.

27.   Solve and check.

$$77 - (4x + 3) = 4(x + 5) + x$$

The solution is x = 6 . (Simplify your answer. Type an integer or a fraction.)

28. The formula B = 26a is used in New England to estimate the minimum furnace output, B, in BTUs, for a modern house with the amount of square feet of flooring, a.

    a) Determine the minimum furnace output for a 1900 ft^2 modern house.

    b) Solve the formula for a.

    What is the minimum furnace output? 49400 BTUs

    $$a = \frac{B}{26}$$

29. Solve

    Dx + Gy = J, for x.

    The solution is x = $\frac{J - Gy}{D}$.

30. Solve for m.

    $$v = \frac{4c}{m}$$

    The solution is m = $\frac{4c}{v}$.

    (Simplify your answer.)

31. Heidi left a 10% tip of $4.40 on a meal. What was the cost of the meal before the tip? What was the total cost of the meal including the tip?

    The cost of the meal before the tip was $ 44 .

    The total cost of the meal including the tip was $ 48.4 .

32. About 47.3 billion pieces of unopened junk mail ends up in landfills each year. This is about 43% of all the junk mail that is sent annually. How many pieces of junk mail are sent annually?

    Approximately 110 billion pieces of junk mail are sent annually.

    (Simplify your answer. Type an integer or a decimal.)

33. A 81-inch board is cut into two pieces. One piece is two times the length of the other. Find the lengths of the two pieces.

    The short piece is 27 inches long.

    The long piece is 54 inches long.

34. The Iditarod sled dog race extends 1049 miles from Anchorage to Nome. If a musher is three times as far from Anchorage as from Nome, how many miles has the musher completed?

The musher has completed 786 miles of the race.
(Round to the nearest whole number.)

35. The ages of Edna, Ellie, and Elsa are consecutive integers. The sum of their ages is 117.

What are their ages?

Their ages are 38 years, 39 years and 40 years old.
(Type the ages in order from youngest to oldest.)

36. A hospital parking lot charges $3.50 for the first hour or part thereof, and $1.75 for each additional hour or part thereof. A weekly pass costs $47.00 and allows unlimited parking for 7 days. If each visit Jonny makes to the hospital lasts one and a half hours, what is the minimum number of visits for which buying a pass would be less expensive than paying each time?

 9 visits would make it less expensive for Jonny to buy a weekly pass.

37. A home has a triangular backyard. The second angle of the triangle is 7° more than the first angle. The third angle is 18° more than three times the first angle. Find the angles of the triangular yard.

The measure of the first angle is 31 °.

The measure of the second angle is 38 °.

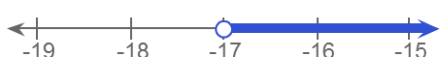The measure of the third angle is 111 °.

38. Solve. Then graph.

$$a + 6 \leq -11$$

Select the correct choice below and fill in the answer box within your choice.

(Simplify your answer.)

A. The solution set is $\{a \mid a \leq -17\}$.

B. The solution set is $\{a \mid a \geq \boxed{}\}$.

C. The solution set is $\{a \mid a > \boxed{}\}$.

D. The solution set is $\{a \mid a < \boxed{}\}$.
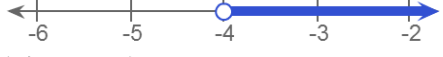
Which of the following is the graph of the solution?

A.

B.

C.

D.

39. Solve using the multiplication principle. Then graph.

$$-13x > -52$$

Choose the correct solution set and graph.

A.

$\{x \mid x < -4\}$

B.

$\{x \mid x < 4\}$

C.

$\{x \mid x > 4\}$

D.

$\{x \mid x > -4\}$

40. Solve using the addition and multiplication principles.

$$14x - 9 < -65$$

The solution is $\{x \mid x \ < \ -4 \}$.

41. Solve using the addition and multiplication principles.

$$31 > 3 - 7x$$

Select the correct choice below and fill in the answer box within your choice. (Simplify your answer.)

  A. The solution set is $\{x \mid x \geq \boxed{} \}$.

  B. The solution set is $\{x \mid x > \ -4 \}$.

  C. The solution set is $\{x \mid x < \boxed{} \}$.

  D. The solution set is $\{x \mid x \leq \boxed{} \}$.

42. Solve using the addition and multiplication principles.

$$12 - 8y - 8y \ < \ 156$$

The solution set is $\{ y \mid y > \ -9 \}$.

43. Solve the following inequality using the addition principle and the multiplication principle.

$$\frac{x}{4} - 1 \leq 3$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

  A. The solution set is $\{x \mid x \geq \boxed{} \}$.

  B. The solution set is $\{x \mid x \leq 16 \}$.

  C. The solution set is the set of all real numbers.

  D. The solution set is the empty set.

44. Solve.

$$3(3 + 4x) - 7 \geq 74$$

The solution set is $\{ x \mid x \geq 6 \}$.

Student: yaser almohaws
Date: 1/1/15
Time: 11:29 AM

Instructor: fahad aljabr
Course: MATH-001: Fundamentals of
Math 11415
Book: Bittinger: Introductory and
Intermediate Algebra, 4e

Assignment: Week 2 Practice
Exercises

45.   Solve the following inequality using the addition principle and the multiplication principle.

$$3(r-6)+2 < 4(r+2)-21$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

✔ The solution set is $\{r|r > \boxed{-3}\}$. (Type an integer or a fraction.)

○ The solution set is $\{r|r < \boxed{}\}$. (Type an integer or a fraction.)

○ The solution set is the set of all real numbers.

○ The solution set is the empty set.

46.   You are taking a history course in which there will be four tests, each worth 100 points. You have scores of 98, 88, and 89 on the first three tests. You must make a total of 360 in order to get an A. What scores on the last test will give you an A?

The solution is $\{s \mid s \geq \boxed{85}\}$.
(Simplify your answer. Type an integer or a decimal.)

47.   The formula R $= -0.075t + 3.85$ can be used to predict the world record in the 1500 meter run, t years after 1930. Determine an inequality that identifies the years in which the world record will be less than 3.4 minutes.

Solve for t.

t > $\boxed{6}$
(Round to the nearest whole number.)

The years after 1930, in which the record is less than 3.4 minutes, are described by the solution set $\{\text{Years} \mid \text{Years} > \boxed{1936}\}$.

48.   A car rents for $35 per day plus 20¢ per mile. You are on a daily budget of $89. What mileage will allow you to stay within your budget?

The solution is $\{m \mid m \leq \boxed{270} \text{ miles}\}$.

49. A reduced fat cookie contains 2 g of fat per serving. In order for food to be termed 'reduced fat', it must have at least 20% less fat than the regular item. What can you conclude about how much fat is in a serving of the regular cookie?

How much fat does a serving of regular cookies contain? Select the correct choice below, and fill in the answer box to complete your choice.

○ A. A serving of the regular cookie has less than ⬜ g of fat.

○ B. A serving of the regular cookie has at most ⬜ g of fat.

○ C. A serving of the regular cookie has more than ⬜ g of fat.

◉ ✔ D. A serving of the regular cookie has at least 2.5 g of fat.