Chapter 2 and 3 Test Review

Math 100

Name ___________________

Solve for x.

1. \(11 = -5x + 16\)  
2. \(-18 = -4x + 6\)  
3. \(-2x + 5 = -2x\)

4. \(5x - 4 = 2(x - 2)\)  
5. \(3(x + 7) = x + 1\)  
6. \(-x + 6 - 2x = -24\)

7. \(-2(x + 9) = 2(x - 1)\)  
8. \(-3x - 3 + 2x = -3 - x\)  
9. \(3x + 18 = -17 - 2x\)
10. \( \frac{2x}{6} = \frac{5}{3} + \frac{2x}{9} \)

11. \( \frac{x}{2} + \frac{35}{8} = \frac{-3x}{4} \)

12. \( \frac{x+5}{3} = \frac{-4}{6} + \frac{3x}{2} \)

13. \( \frac{2x+1}{3} = \frac{x}{4} + \frac{3}{2} \)

14. Solve for \( D \)
   \[ A = 3B + 2D \]

15. Solve for \( B \)
   \[ A = \frac{2B + m}{7} \]

16. Solve for \( y \)
   \[ 2x + 3y = 11 \]
Solve the inequality and graph each solution on the number line given:

17. \(-1 > -3x + 5\)  
18. \(-2x + 6 \leq -6\)  
19. \(-19 > 3x - 4\)

20. \(13 \geq 2x - 3\)  
21. \(2x - 3 < 4x + 7\)  
22. \(-3(x + 8) < 3\)
To get credit you must show all the required steps

23. A used computer sells for 20 dollars more than four times the amount of a set of speakers. A used monitor sells for forty dollars less than three times what the speakers sell for. If they sell for 580 dollars all together, how much does each item sell for?

24. Manny, Moe and Joe own a Tire store. Many sold 12 less tires then Moe sold. Joe sold twice as many tires as Moe sold. If they sold 236 tires all together, how many tires did each of them sell?
25. Find the sides of a rectangle if the length is 2 more than three times the width and the perimeter of the rectangle is 68 inches.

26. Find the 3 sides of a triangle if the second side is 20 more the first side and the third side is 3 more than three times the first side. The perimeter of the triangle is 83 feet.
27. Find the 3 angles of a triangle if the second angle is 20 degrees less than the first and the third angle is 40 degrees less than 3 times the first angle.

28. Find the 3 angles of a triangle if the second angle is 30 degrees more than twice the first angle and the third angle is 60 degrees more than the second angle.
29. Find 2 complementary angles if the second angle is 15 degrees less than twice the measure of the first angle.

30. Bill has 3 more than twice as many dimes as he does nickels. If the coins are worth a total of $2.30 out how many of each coin does he have?
31. The Little League concession stand sells candy bars for 35 cents and water for 20 cents. On a hot day they sell 5 times as much water as they do candy. When receipts are $16.20 find how many of each type they sell.

32. David wants to invest some of his savings in a CD that pays 4% interest and $2000 more than that in a CD that pays 8%. If he wants to make a total of $760 interest in one year, how much money should he put in each account?
Chapter 2–3 Test Review Answers:

1. $1 = x$  
2. $6 = x$  
3. no solution  
4. $x = 0$  
5. $x = -10$  
6. $x = 10$  
7. $-4 = x$  
8. all real numbers  
9. $x = -7$  
10. $x = 15$  
11. $x = \frac{-7}{2}$

12. $x = 2$  
13. $x = \frac{14}{5}$  
14. $D = \frac{A - 3B}{2}$  
15. $B = \frac{7A - m}{2}$  
16. $y = \frac{11 - 2x}{3}$

17. $2 < x$  
18. $x \geq 6$  
19. $-5 > x$  
20. $x \leq 8$

21. $x > -5$  
22. $x > -9$

23. Speakers are $75, computer is $320 and Monitor is $185

24. Moe sold 62, Joe sold 124, Many sold 50

25. Width = 8 inches, Length = 26 inches  
26. $S_1 = 12$ ft, $S_2 = 32$ ft, $S_3 = 39$ ft

27. $\angle 1 = 48$ deg., $\angle 2 = 28$ deg., $\angle 3 = 104$ deg.

28. $\angle 1 = 12$ deg., $\angle 2 = 54$ deg., $\angle 3 = 114$ deg.

29. $\angle 1 = 35$ deg., $\angle 2 = 55$ deg.

30. 8 nickels and 19 dimes

31. 12 candy bars and 60 waters

32. $5000$ at 4%, and $7000$ at 8%.