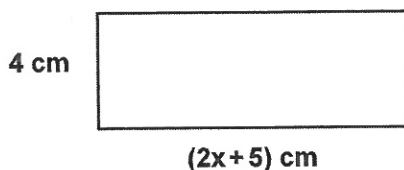


Equations: Chapter Test 1

1. The solution to the equation $2x + 4 = 12$ is ...

- a. $x = 2$
- b. $x = 32$
- c. $x = 8$
- d. $x = 4$

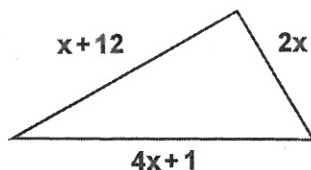
2. The area of a rectangle shown below is 36 cm^2 .



Which of the following is FALSE?

- a. The perimeter of the rectangle is 26 cm
 - b. The length of the rectangle is 9 cm
 - c. The perimeter of the rectangle is 38 cm
 - d. The width of the rectangle is 4 cm
3. Translate the following using x as the unknown and solve ...
- "Five less than triple an unknown number is forty-six"*
4. Triple a number minus four is equal to twelve more than that same number. What is the number?
5. Solve the following equation: $4(2x - 3) - 2x = 14$
6. Solve the following equation: $\frac{3}{7}x = 45$
7. On an algebra test, I had four times as many correct answers as incorrect ones. There were 80 questions on the test. How many did I get right?
8. You need to divide \$150 among three people so that the second will have twice the amount of the first, and the third will have forty dollars more than the second. Indicate how much money you will give to each person.
9. The perimeter of a rectangular frame is 70 cm. The length is 7 cm longer than the width. Find the dimensions of this frame.

10. Find the dimensions of the following triangle if the perimeter is 160 dm.



Extension

11. After their annual garage sale, Sarah and Alex were counting their coins. They had 266 coins at the end of the day, all nickels and quarters. If the value of the coins was \$52.50, how many of each coin did they have?
12. Two angles are complementary. The larger is 18 degrees more than triple the smaller. Find the measure of the larger angle.

Equations: Chapter Test 2

1. Which of the following equations does not have the same solution as the others?
 - a. $4x - 7 = 1$
 - b. $2(2x - 1) = 6$
 - c. $3(x - 9) + x = -15$
 - d. $-5x + 16 = 6$
2. Cassandra is five years younger than twice her brother's age. Together they are 34 years old. Which of the following equations can NOT be used to find their ages?
 - a. $2x + x - 5 = 34$
 - b. $3x - 5 = 34$
 - c. $2x - 5 = 34$
 - d. $2x - 5 + x = 34$
3. Solve the following equation: $3(x - 5) - 2(4x + 1) = 5$
4. Solve the following equation: $\frac{2(x - 4)}{4} = \frac{-6(5x + 3)}{8}$
5. Four minus double a number is the same as three less than five times that same number. What is this number?
6. The sum of three consecutive integers is 81. What is the largest of these integers?
7. Angles $(2x + 5)^\circ$ and $(4x - 11)^\circ$ are supplementary. Find the measure of each angle. Keep in mind that supplementary angles add up to 180° .
8. Cindy and Arnold are elementary school teachers. They both have a big collection of stickers. Cindy has thirteen stickers less than triple what Arnold has. Together they have 171 stickers. How many stickers does Cindy have?
9. A 500 seat auditorium is divided into three sections, Blue, Red and White. There are 170 seats in Blue and there are 50 more seats in Red than in White. How many seats are in each section?
10. Kevin's backyard is in the shape of a rectangle with a perimeter of 12 m. The length of his backyard is 1.2 metres less than double the width. Kevin wants to put down grass sod in his back yard. If it costs $\$14.60/\text{m}^2$ for grass sod and Kevin has a budget of $\$150$, will he be able to have grass in his entire backyard this year?

Extension

11. To win the Math Challenge competition, Amanda must figure out the mystery number. She is given the following clue:

"A third of double this number minus four equals ten"

Help Amanda win the competition. What is the mystery number?

12. Ryan is two years older than four times his sister's age. The difference between their ages is 11. How old are Ryan and his sister?