WORD PROBLEM PRACTICE

Remember to decide what the variable will stand for and then show your equation.

1) The sum of two numbers is 19. The second number is 8 less than twice the first. Find the numbers.

2) The second of two numbers is 4 more than the first. If the second number is increased by 1, the result is twice the first number. Find the numbers.

3) Eleanor had three times as many quarters as nickels. She had $1.60 in all. How many nickels and how many quarters did she have?

4) Side B of a triangle is twice as long as side C. Side A is 3 feet longer than side B. The perimeter is 59 ft. Find the length of each side.

5) One of the two congruent sides of an isosceles triangle is 7 cm. The perimeter is 24 cm. Find the base.

6) Find two consecutive integers such that the sum of the lesser integer and 3 times the greater integer is 83.

7) Mike scored 15 points more than twice the lowest score on a test. Mike scored 85 points. What was the lowest score?

8) Before Ms. Manning left on her trip to New York, she decided to plan carefully how much money she should set aside to cover the cost of the vacation. First, the plane ticket would cost $156. Ms. Manning decided she would use three-fourths of the remaining money in her budget for a hotel, rental car and meals. She added $30 for souvenirs and she wanted to have $100 left over for emergencies. How much money should Ms. Manning start with in her vacation budget?

9) Dr. Intestine recommended that Marcy take eight tablets of her new medication on the first day and then four tablets each day until the prescription was used. The prescription contained 28 tablets. How many days will Marcy be taking pills after the first day?

10) Twice a number is 220 less than six times the number. What is the number?

11) Route 1A along the Maine coast is called one the most scenic highways in America. Every year, thousands of people go there to see the ocean and the charming New England villages. Suppose you rented a car in Portland for $139.95 plus $.25 per mile for each mile over 100 miles. If you had budgeted up to $200 for car rental in your vacation budget, how many miles could you drive and stay within the budget?

12) Every night you go outside to practice your free throw shooting for basketball. You want to shoot an average of 125 shots per day. On Sunday your arm is sore and you are only able to shoot 85, on Monday you shoot 100, on Tuesday you have a spurt of energy and shoot 150, on Wednesday you have to study for a math test and so you only shoot 90, on Thursday you shoot 140 and on Friday 100 shots. How many shots do you have to shoot on Saturday to keep your 125 shot average?

WORD PROBLEM II ANSWERS

Remember to decide what the variable will stand for and then show your equation.

1)   The sum of two numbers is 19. The second number is 8 less than twice the first. Find the numbers.

Let x = 1st number
$2x - 8$ = 2nd number
$x + 2x - 8 = 19$
$3x - 8 = 19$
$3x = 27$
$x = 9$
First number = 9
2nd number = 10

2)   The second of two numbers is 4 more than the first. If the second number is increased by 1, the result is twice the first number. Find the numbers.

Let x = 1st number
$4 + x$ = 2nd number
$4 + x + 1 = 2x$
$5 + x = 2x$
$5 = x$
First number = 5
2nd number = 9

3)   Eleanor had three times as many quarters as nickels. She had $1.60 in all. How many nickels and how many quarters did she have?

Let x = nickels
$3x$ = quarters
$5x + 75x = 160$
$80x = 160$
$x = 2$

2 nickels
6 quarters

4)   Side B of a triangle is twice as long as side C. Side A is 3 feet longer than side B. The perimeter is 59 ft. Find the length of each side.

$A = 2x + 4$
$B = 2x$
Let C = x
$2x + 4 + 2x + x = 59$
$5x + 4 = 59$
$5x = 55$
$x = 11$

Side A = 26 ft.

Side B = 22 ft.
Side C = 11 ft.

5) One of the two congruent sides of an isosceles triangle is 7 cm. The perimeter is 24 cm. Find the base.

Let x = base
7 + 7 + x = 24
14 + x = 24
x = 10

Base is 10 cm.

6) Find two consecutive integers such that the sum of the lesser integer and 3 times the greater integer is 83.

1st # = x
2nd # = x + 1

x + 3(x + 1) = 83
x + 3x + 3 = 83
4x + 3 = 83
4x = 80
x = 20

1st # = 20
2nd # = 21

7) Mike scored 15 points more than twice the lowest score on a test. Mike scored 85 points. What was the lowest score?

Let x = lowest score
Mile = 15 + 2x
15 + 2x = 85
2x = 70
x = 35

Lowest score = 35 points

8) Before Ms. Manning left on her trip to New York, she decided to plan carefully how much money she should set aside to cover the cost of the vacation. First, the plane ticket would cost $156. Ms. Manning decided she would use three-fourths of the remaining money in her budget for a hotel, rental car and meals. She added $30 for souvenirs and she wanted to have $100 left over for emergencies. How much money should Ms. Manning start with in her vacation budget?

Let x = vacation budget
x - 4 (100 + 30) = 156
x - 400 - 120 = 156
x - 520 = 156
x = 676

$676

9)   Dr. Intestine recommended that Marcy take eight tablets of her new medication on the first day and then four tablets each day until the prescription was used. The prescription contained 28 tablets. How many days will Marcy be taking pills after the first day?

Let x = days
8 + 4x = 28
4x = 20
x = 5

5 days

10) Twice a number is 220 less than six times the number. What is the number?

Let x = the number
2x = 6x - 220
-4x = -220
x = 55

The number is 55.

11)   Route 1A along the Maine coast is called one the most scenic highways in America. Every year, thousands of people go there to see the ocean and the charming New England villages. Suppose you rented a car in Portland for $139.95 plus $.25 per mile for each mile over 100 miles. If you had budgeted up to $200 for car rental in your vacation budget, how many miles could you drive and stay within the budget?

Let m = miles
$139.95 + .25 (m - 100) \le 200$
$139.95 + .25m - 25 < 200$
$114.95 + .25m \le 200$
$.25m \le 85.05$
$m \le 340.2$

Less than or equal to 340.2 miles.

12) Every night you go outside to practice your free throw shooting for basketball. You want to shoot an average of 125 shots per day. On Sunday your arm is sore and you are only able to shoot 85, on Monday you shoot 100, on Tuesday you have a spurt of energy and shoot 150, on Wednesday you have to study for a math test and so you only shoot 90, on Thursday you shoot 140 and on Friday 100 shots. How many shots do you have to shoot on Saturday to keep your 125 shot average?

Let x = shots to throw on Sat
$$\frac{85 + 100 + 150 + 90 + 140 + 100}{7} = 125$$

$$\underline{665 + x} = 125$$

7

$665 + x = 875$

$x = 210$

Your arm will be really sore because you need to throw 210 shots on Saturday.