Word Problem Informal Review

*For additional practice, look back over the examples we did as classwork and homework in this unit.**

General Word Problems

1. Three boxes have a total weight of 720 pounds. Box A weighs twice as much as Box B. Box C weighs 30 pounds more than Box A. How much do each of the boxes weigh?
2. The Nelsons are going to Carowinds. The total cost of the tickets for the family of two adults and three children was $79.50. If an adult ticket costs 6.00 more than a child's ticket, find the cost for each.
3. Carlos is surveying a plot of land in the shape of a right triangle. The area of the land is 45,000 square meters. If one leg of the triangular plot is 180 meters long, what is the other leg of the triangle?
4. The length of a rectangle is 19 feet longer than the width If the perimeter is 46 feet, what are the dimensions of the rectangle?
5. In a triangle the measure of the largest angle is 3 times the measure of the smallest angle. The measure of the remaining angle is twice the measure of the smallest angle. What is the measure of the largest angle?

Mixture Problems

1. You have 6 liters of water that have 20 percent strawberry juice. How many liters of a 80 percent strawberry juice should be added to the mixture to make 75 percent strawberry juice?
2. Two hundred liters of a punch that contains 35% fruit juice is mixed with 300 liters (L) of another punch. The resulting fruit punch is 20% fruit juice. Find the percent of fruit juice in the 300 liters of punch.
3. A store owner wants to mix cashews and almonds. Cashews cost 2 dollars per pound and almonds cost 5 dollars per pound. He plans to sell 150 pounds of a mixture. How many pounds of each type of nuts should be mixed if the mixture will cost 3 dollars?
4. How many pounds of lima beans that cost $0.90 per pound must be mixed with 16 pounds of corn that costs $0.50 per pound to make a mixture of vegetables that costs $0.65 per pound?

Consecutive Integer Problems

1. Find three consecutive even integers whose sum is 120.
2. Find two consecutive odd integers such that five times the first equals three times the second.
3. Find three consecutive odd integers whose sum is 129.
4. Three consecutive integers are such that three times the smallest is 18 more than the largest. Find the integers.
5. Five times the larger of two consecutive odd integers is equal to one more than eight times the smaller.
6. Half of the smaller of two consecutive even integers is equal to two more than the larger integer.

Age Problems

1. In 56 years, Kevin will be 9 times as old as he is right now. How old is he right now?
2. Ten years from now, Orlando will be three times older than he is today. What is his current age?
3. John's father is 5 times older than John and John is twice as old as his sister Alice. In two years time, the sum of their ages will be 58. How old is John now?
4. Ben is eight years older than Sarah. 10 years ago, Ben is twice as old as Sarah. Currently, how old is Ban and Sarah?
5. Arun is 4 times as old as Pete is today. Six years ago, Arun was 6 times as old as Pete. How old are they today?
6. Becca is twice as old as Susan and Greg is 9 years older than Susan. 3 years ago, Becca was 9 less than 3 times Susan's age. How old is Greg now?

Work Problems

1. Jessica can type 3 pages per hour. Her friend, Michael, can type 8 pages per hour. How long would it take to type a 22-page paper if they worked together?

2. Suppose one painter can paint the entire house in twelve hours, and the second painter takes eight hours to paint a similarly-sized house. How long would it take the two painters together to paint the house?
3. Brooks can mow a lawn in 4 hours. Jeremy can mow the same lawn twice as fast. How long would it take them working together?

Motion Problems

1. Two airplanes leave Dallas at the same time and fly in opposite directions. One airplane travels 80 miles per hour faster than the other. After three hours, they are 2940 miles apart. What is the rate of each airplane?
2. A train leaves a train station at 1 p.m. It travels at an average rate of 60 mi/h. A high-speed train leaves the same station an hour later. It travels at an average rate of 96 mi/h. The second train follows the same route as the first train on a track parallel to the first. In how many hours will the second train catch up with the first train?
3. Jane and Peter leave their home traveling in opposite directions on a straight road. Peter drives 15 mi/h faster than Jane. After 3 hours, they are 225 miles apart. Find Peter's rate and Jane's rate.
4. Monica left her house at 3.00 pm to drive 60 mph to drive towards Central Perk. Phoebe left the same house at 5.00 pm, driving 80 mph in the same direction as Monica. How long will it take Phoebe to overtake Monica?