Word Problem Notes

Example: Oberon Cell Phone Company advertises service for 3 cents per minute plus a monthly fee of $29.95. If Parker's cell phone bill for October is $38.95, find the number of minutes he used.

Example: Quinn was shopping at a used book sale where all books were selling at the same price. He bought six science fiction books and eight mysteries. He also decided to buy a poster for $2.40. In total Quinn spent $8.70. What was the price of a single book?

Example: Rachel and Sabine belong to different local gyms. Rachel pays $35 per month and a one - time registration fee of $15. Sabine pays $25 per month but had to pay a $75 registration fee. After how many months will Rachel and Sabine have spent the same amount on their gym memberships?

Example: While on vacation, Talisha won a lot of tickets at two arcades on the boardwalk she was visiting. The first arcade charges $1 to cash in the tickets and gives you 12 cents back on each ticket won, while the second arcade gives you 10 cents back on each ticket and no fee to cash in. In order for Talisha to make an equal profit from each arcade, how many tickets must she have won?

Example: The school that Stefan goes to is selling tickets to a choral performance. On the first day of ticket sales the school sold 3 senior citizen tickets and 1 child ticket for a total of $38. The school took in $52 the second day by selling 3 senior citizen tickets and 2 child tickets. Find the price of a senior citizen ticket and the price of a child ticket.

Example: The senior class at High School A and High School B planned separate trips to New York City. The senior class at High School A rented and filled 1 van and 6 buses with 372 students. High School B rented and filled 4 vans and 12 buses with 780 students. Each van and each bus carried the same number of students. How many students can a bus carry? How many students can a van carry?

Example: Robert makes $3.50 per hour working at a convenience store. If he gets a bonus of $25 this week, how many hours must he work to make at least $165?

Example: The charity that you volunteer for is selling potted daffodils in the spring to raise money. The charity has spent $250 on supplies and plans to sell them for $5 each.
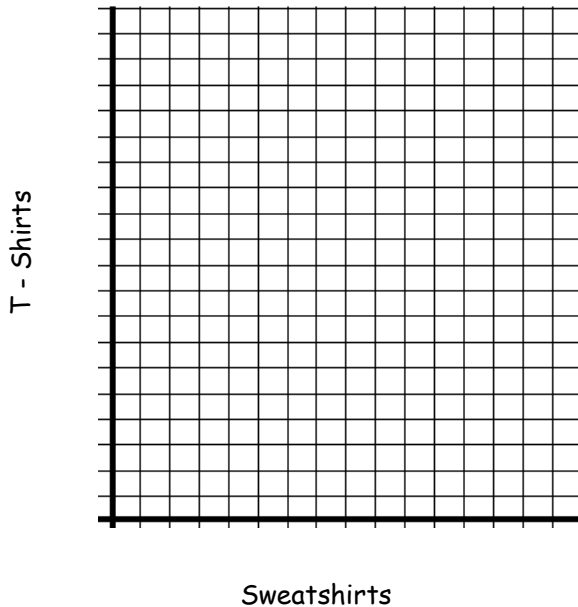   a) Write and solve an inequality that gives the possible numbers of daffodils (d) the charity needs to sell in order for the profit to be positive.

   b) If the charity bought 55 daffodil bulbs, are they able to make a profit? Explain.

Example: Student council is selling shirts to raise money to support the families affected by the tsunami in the Philippines. They are $3 for every t - shirt (t) they sell and $5 for every sweatshirt (s).

    a)   Write an inequality that represents a profit of at least $500.

    b)   What are the possible number of t - shirts student council must sell in order to make a profit?

T - Shirts

Sweatshirts

Example: For a fund raiser two sizes of candy bars are being sold. They earn a profit of $2 on the small bars (s) and $4 on the large bars (L).

    a)   Write an inequality that represents a profit of at least $250.

    b)   Graph the inequality on the coordinate grid, labeling your axes as necessary using large bars for the x - axis and small bars for the y - axis.

Small

Large