

Homework: Applications of Inequalities

Define a variable and write an inequality to model each situation.

1. The temperature in a refrigerated truck must be kept at or below 38°F. $t \leq 38$
2. The maximum weight on an elevator is 2000 pounds.
3. A least 20 students were sick with the flu.
4. The maximum occupancy in an auditorium is 250 people.
5. The maximum speed on the highway is 55 mi/h.
6. A student must have at least 450 out of 500 points to earn an A. $A \geq .9$
7. The circumference of an official major league baseball is at least 9.00 inches.
 $450 \div 500 = 0.9 \leftarrow 90\% \text{ is an A!}$

Define a variable, write an inequality and solve each problem.

8. Joan needed \$100 to buy a graphing calculator for her math class. Her neighbor will pay her \$5 per hour to babysit and her Father gave her \$10 for mowing the lawn. What is the minimum amount of hours she will need to babysit in order for her to buy her calculator?

9. Mrs. Scott decided that she would spend no more than \$120 to buy a jacket and a skirt. If the price of the jacket was \$20 more than 3 times the price of the skirt. Find the highest possible price of the skirt?

10. The dance committee hired a DJ for the fall dance. The DJ charges \$125 per hour plus \$55 for an assistant. The committee wants to keep the total cost under \$600. What is the maximum amount of hours the DJ will play at the dance?

#9

$$\text{jacket} + \text{skirt} \leq 120$$

+ S

jacket

$$3s + 20$$

3 times
skirt\$20
more