

Aim: How do we use inequalities to solve word problems?

Date \_\_\_\_\_

**Do now: Represent each word or phrase with an inequality symbol (  $<$ ,  $>$ ,  $\leq$ ,  $\geq$  )**

a.) at least

b.) minimum

c.) under

d.) at most

e.) is fewer than

f.) over

g.) does not exceed

h.) is more than

i.) no more than

j.) maximum

k.) is less than

l.) no less than

---

**Write the verbal sentence as an inequality.**

1. Three times a number is at most 18. \_\_\_\_\_
2. A number divided by -2 is at least 10. \_\_\_\_\_
3. Twenty-one less than a number is less than 30. \_\_\_\_\_
4. The product of nine and a number increased by 2 is greater than 38. \_\_\_\_\_

---

**Write an inequality to solve the following word problems.**

5. The sum of three consecutive integers is greater than 123. What are the smallest values for the three integers?
  
  
  
  
  
  
  
  
  
  
6. Cindy plans to join a gym. A gym membership costs \$350 for the year and each exercise class costs an additional \$18. Cindy does not want to spend more than \$1000 on the gym for the year. Find the maximum number of exercise classes Cindy can take in one year.

7. Jonah wants to save at least \$2000 in a year. In the first 3 months of the year, he saved \$650. What is the least amount he must save for the each of the remaining nine months of the year?

8.) A cell phone plan charges \$39.90 a month, plus \$0.05 per text message. Write an inequality that can be solved to find out how many text messages can be sent while still keeping the monthly bill under \$50.

9.) Chelsea earns \$30 per day plus \$5 for every sale that she makes at her job. On Thursday, she wants to earn at least \$60. How many sales does Chelsea have to make?

10.) Mr. Mason's height is at most 4 inches more than twice his daughter's height. Mr. Mason's height is 70 inches. How tall is his daughter?

11.) Pete can spend no more than \$49 on lunch for the art club. If sandwiches cost \$3 each and Pete spends a total of \$13 on drinks, how many sandwiches can he buy?

12.) Marcy must score an average of at least 90% between her two exams to make the math honor roll. If she scores a 94% on one of the exams, what score can she get on the other exam to make the math honor roll?