Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_

Solving Inequalities Using Multiplication and Division Notes

Solve and graph the following inequalities.

![[image]]()1.  2. 

![[image]]()

![[image]]()![[image]]()3.  4. 

**Rule**: When you multiply or divide an inequality by a negative number, you must change the

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

5. $-4x<24$ 6. 

![[image]]()![[image]]()

7.  8. $-\frac{5}{2}x\geq 10$

![[image]]()![[image]]()

Solve each problem with an inequality.

**Phrase: Inequality:**

No more than \_\_\_\_\_\_\_\_\_\_

At least \_\_\_\_\_\_\_\_\_\_

No less than \_\_\_\_\_\_\_\_\_\_

At most \_\_\_\_\_\_\_\_\_\_

A minimum of \_\_\_\_\_\_\_\_\_\_

More than \_\_\_\_\_\_\_\_\_\_\_

Less than \_\_\_\_\_\_\_\_\_\_\_

9. Suppose you earn $ 7.50 for every lawn you mow. You need to earn at least $120 to pay for camp. How many lawns must you mow?

10. A gallon jug of milk cost $1.20. What is the greatest number of jugs of milk that you can buy with $10?

11. $0.25x<5$ 12. 

![[image]]()![[image]]()

13. $-8.4f>2.1$ 14. $9.6<-16c$

![[image]]()![[image]]()

15. $-1.5\geq 6n$ 16. 

![[image]]()![[image]]()

17.  18. $-2t>-1.22$

![[image]]()![[image]]()

**Underline or highlight the inequality phrase. Write the verbal sentence as an inequality. Solve the inequality and graph your solution on a number line.**

19. The product of 8 and *x* is greater than 50.

Inequality: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_

![[image]]()

20. The quotient of *v* and -9 is less than -18.

Inequality: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_

![[image]]()