

Name : \_\_\_\_\_

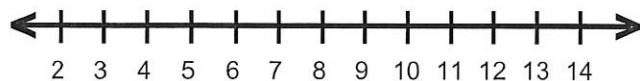
Score : \_\_\_\_\_

Teacher : \_\_\_\_\_

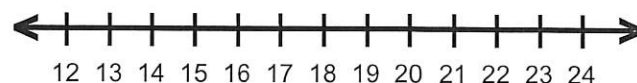
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## Solve and Graph the Inequalities

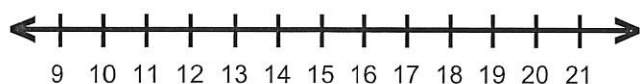
1)  $1 + d \leq 5$



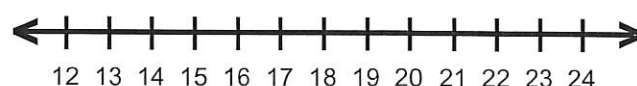
6)  $16 \leq j - 3$



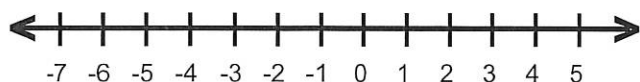
2)  $-5 + q \leq 8$



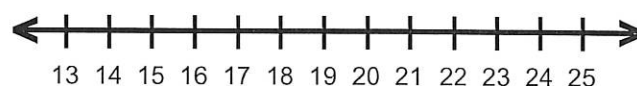
7)  $17 \geq w - 3$



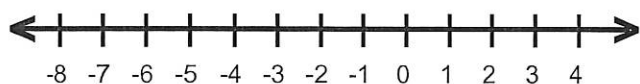
3)  $8 < 8 + g$



8)  $n - 5 \geq 12$



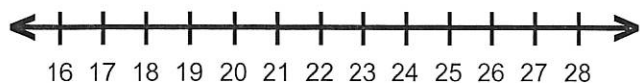
4)  $-8 + c > -14$



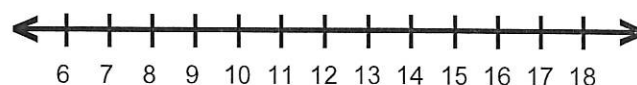
9)  $5 > x + 9$



5)  $r - 9 > 11$



10)  $9 < -4 + z$



# Properties of Inequality Handout

## Inequality Symbols :

**$>$  Greater Than**

**$\geq$  Greater Than or Equal To**

(The line underneath the Greater Than sign indicates also Equal To.)

**$<$  Less Than**

**$\leq$  Less Than or Equal To**

(The line underneath the Less Than sign indicates also Equal To.)

## Graphing Inequality Symbols :

 **Greater Than**

(The open circle indicates that this is **NOT EQUAL TO** the number that is graphed.)

 **Greater Than or Equal To**

(The closed circle indicates that this is **EQUAL TO** the number that is graphed.)

 **Less Than**

(The open circle indicates that this is **NOT EQUAL TO** the number that is graphed.)

 **Less Than or Equal To**

(The closed circle indicates that this is **EQUAL TO** the number that is graphed.)



## TWO STEP INEQUALITY WORD PROBLEMS

1. Daniel had \$25 to spend at the fair. If the admission to the fair is \$4 and the rides cost \$1.50 each, what is the greatest number of rides Daniel can go on?

A. Write an inequality that represents Daniel's situation.

B. How many rides can Daniel go on?. Justify your answer.

C. Graph the solutions on a number line.

2. The seventh grade class is putting on a variety show to raise money. It cost \$700 to rent the banquet hall that they are going to use. If they charge \$15 for each ticket, how many tickets do they need to sell in order to raise at least \$1000?

A. Write an inequality that represents the situation.

B. How many tickets do they need to sell? Justify your answer.

C. Graph the solution on a number line.

3. Kevin has \$25. MP3 downloads cost \$0.75 each. How many songs can he download and still have \$13 left to spend?

A. Write an inequality that represents Kevin's situation.

B. How many downloads can Kevin purchase? Justify your answer.

C. Graph the solution on a number line.

4. Triniti had \$500 in a saving account at the beginning of the summer. She wants to have at least \$200 in the account by the end of the summer. She withdraws \$25 each week for food, clothes, and movie tickets.

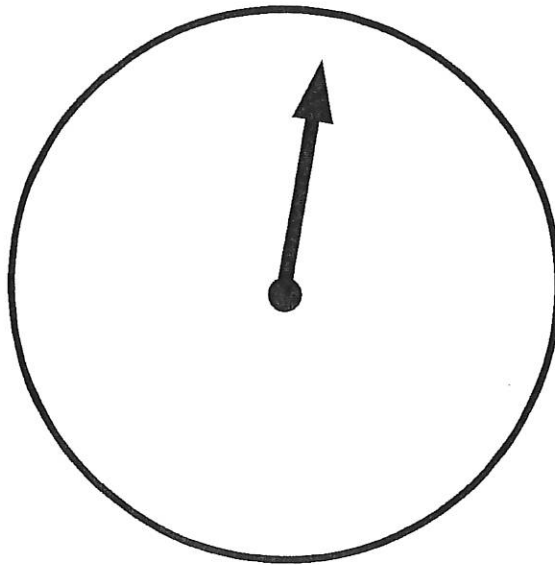
A. Write an inequality that represents Triniti's situation.

B. How many weeks can Triniti withdraw money from her account. Justify your answer.

C. Graph the solution on a number line.

## Spinner Creation Evaluation

Use the diagram below to create a spinner according to the given information.



Spinner Criteria:

- (1) Create a spinner so that the probability of landing on red is more than the probability of landing on any other single color.
- (2) All the sections of the spinner must be equal and there must be at least 6 sections.
- (3) Use *exactly* two other colors besides red.
- (4) Use the table below to state the probability of each color using a fraction.

Color	Probability (in words)	Probability as a Fraction (in simplest form)

## Probability Likelihood Practice


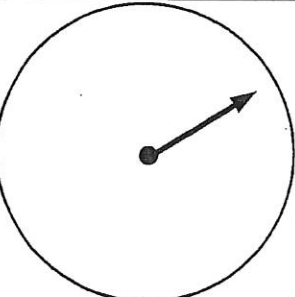
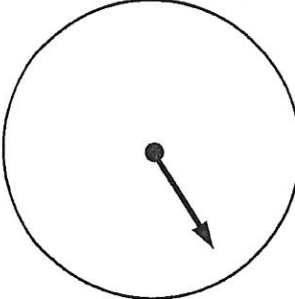
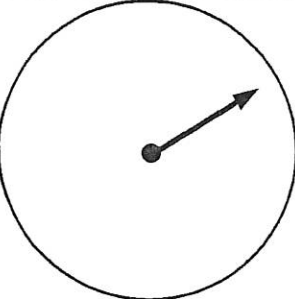
### Probability Notes:

An event is **certain** if it will *always* happen. It has a probability of 1.

An event is **impossible** if it will *never* happen. It has a probability of 0.

An event is **likely** if it will *probably* happen. If a spinner has more of one color than another, that color is *more likely* to be spun than others.

An event is **unlikely** if it will probably *not* happen. If a spinner has a very small section of one color, it is not likely that the small section will be spun.

(1) Color the spinner so it is unlikely to spin yellow.	(2) Color the spinner so it is certain to spin blue.
	
(3) Color the spinner so it is impossible to spin green.	(4) Color the spinner so it is as likely to spin blue as red.
	

Tell whether the chances of each are *certain*, *impossible*, *likely*, or *unlikely*.

5. A horse will tell you in words whether it wants to canter or gallop. \_\_\_\_\_

6. Tomorrow the sun will rise. \_\_\_\_\_

7. You will have homework this weekend. \_\_\_\_\_

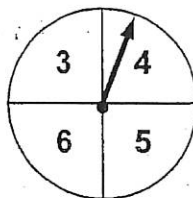
8. The ice in your drink will melt. \_\_\_\_\_

9. You will never have to eat broccoli. \_\_\_\_\_

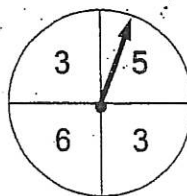
10. You will have to study to get a 100% on your tests. \_\_\_\_\_

## Spinner Predictions

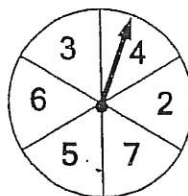
Predict the results of spinning a spinner and use an experiment to test your predictions. Use the spinners shown above each table to complete the table.



	Event	Probability as a Fraction	Possible Outcome: Less likely, More likely, Equally likely
(1)	Spinning an even number		
(2)	Spinning an odd number		



	Event	Probability as a Fraction	Possible Outcome: Less likely, More likely, Equally likely
(3)	Spinning an even number		
(4)	Spinning an odd number		



	Event	Probability as a Fraction	Possible Outcome: Less likely, More likely, Equally likely
(5)	Spinning an even number		
(6)	Spinning an odd number		

## Combination & Arrangements Notes/Practice (pp. 2 of 2)

Practice.

Make a list or draw a diagram to find the total number of outcomes.

(1) How many 3-digit numbers can be made from the digits in 461?	(2) How many types of sandwiches can be made with ham, turkey, or tuna and wheat, white, or rye bread?
(3) Nathan selects 2 DVDs from a stack of 6 DVDs. How many ways can he select the 2 DVDs?	(4) How many ways can Sara wear her red, green, or white sweater on 3 different days wearing each sweater only 1 time?
(5) Millie selected 2 pictures out of the 4 pictures to hang on the wall. How many ways can she hang the pictures on the wall?	(6) How many different ways can you arrange the letters in the word CAT?