Inequalities Review Packet

Solve the inequality and graph the solution set.

1.
$$\frac{x}{3} - 1 \ge -3$$



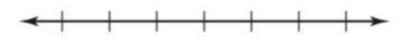
2.
$$3p + 2 < -10$$



3.
$$2 + \frac{x}{-5} \ge 4$$



4.
$$-x - 12 < -50$$



5.
$$-2(3x-1) \ge 38$$



Directions for #6-9: <u>Choose a variable and write a let statement</u> . Write and solve an inequality to answer the question. Show your work. Write your answer in a complete sentence.	
6. Michael needs to buy 6 work shirts that are each the same price. After he uses a \$30 gift certificate, he can spend no more than \$90. What is the maximum amount that each shirt can cost?	
7. You have \$20 for taxi fare. The ride cost \$5.00 plus \$2.50 per mile. What is the maximum number of miles you can ride for \$20.00?	
8. Daniel has \$25 to spend at the fair. If the admission to the fair is \$4 and the rides cost \$1.50, what is the greatest number of rides Daniel can go on?	

9.	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?
Write each statement as an inequality.	
10.	The product of a number and -5 is at least 35.
11.	A number divided by -3 is no more than 12.
12.	The sum of 15 and a number is at most 1.
13.	You must be at least 36 inches tall to ride the roller coaster
14.	Children under the age of 17 are not able to attend R rated movies without a parent or guardian. Let $a = age$ of child not allowed to attend movie
15.	Infants and children are required to be in rear-facing car seats until they weigh at least 20 lbs. Let $w = $ weight of child no longer in rear-facing seat

Directions: Choose the letter of the correct answer.

16. You earn \$8.50 per hour at your summer job. You want to buy a smartphone that costs \$340. Which inequality can be used to find the number of hours you need to work in order to buy the smart phone.

a) $8.50h \ge 340$

c) $8.50h \le 340$

b) $340h \le 8.50$

d) $\frac{8.50}{340} \le h$

17. You have a gift card worth \$90. You want to buy several movies that cost \$12 each. Which inequality can be used to find the number of movies you can buy with the \$90 gift card?

a) $12g \le 90$

c) $12g \ge 90$

b) $\frac{12}{90} \ge g$

d) $\frac{g}{12} \le 90$

18. You have \$18 to buy peppers. Peppers cost \$1.50 each. Which inequality can be used to find how many \$1.50 peppers can be purchased for \$18.00?

a) $1.50x \ge 18.00$

c) $\frac{x}{1.50} \ge 18.00x$

b) $1.50x \le 18.00$

d) $1.50 \le 18.00x$

19. Every month, \$45 is withdrawn from James' savings account to pay for his gym membership. Which inequality can be used to find the number of months that James can pay for his gym membership, if he has \$360 saved?

a) $360m \ge 45$

c) $\frac{m}{45} \ge 360$

b) $\frac{45}{360} \ge m$

d) $45m \le 360$